

Modern

LITHOGRAPHY

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AUG 15 1960

TECHNOLOGY
DEPARTMENT

Too Many Exhibitors?

Better Sales Through
Better Management

Five Hurdles for Litho

Litho on Plastic

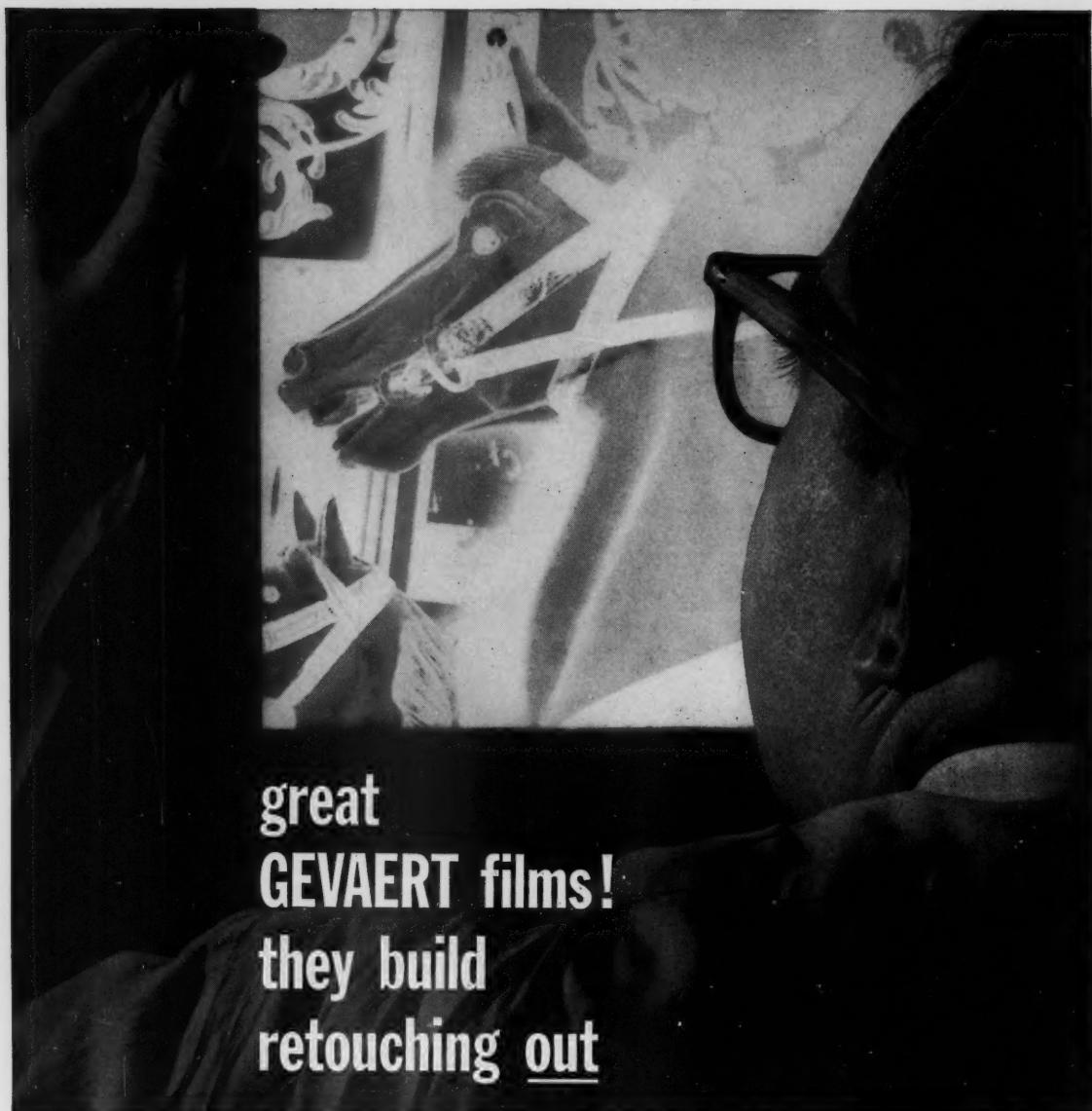
Craftsmen Meet In Atlanta

Quality Control of Ink

In this issue

AUGUST, 1960





great
GEVAERT films!
they build
retouching out

Gevaert's Graphic Pan P32p and Graphic Non Ortho N32p films are the perfect twosome that will drastically reduce your art and retouching time. These great films give you scalpel-sharp detail every time, have the tolerance born of quality. Both coated on dimensionally stable polystyrene base.

Graphic Pan P32p—Panchromatic sensitivity, brilliant gradation. Exceptional color balance faithfully reproduces the relationship of every tone in the original. Ideal for

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Graphic P 2 Plate—for making separation negatives from color transparencies or copy.

Process Extra Ortho 0 5—for making halftone positives in the Dultgen process.

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GEVAERT

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ROYAL ZENITH ANNOUNCES THE AUTOSCAN

PHOTOGRAPHIC COLOR SCANNER

Delivering continuous tone separations, color-corrected and balanced for ink, paper and printing process, for copy up to 24"x 24" including 1.5 enlargement and $\frac{1}{3}$ reduction to a maximum negative size of 20"x 16".

The AUTOSCAN, developed by the noted British firm of Hunter-Penrose, Ltd., leaders in graphic arts for 60 years, is a fully operational continuous-tone color scanner available for purchase today. It produces color-separated negatives for lithographic, letterpress, or gravure reproduction of the highest quality.

The AUTOSCAN is not an experimental device nor a prototype. It is an established, working instrument, now in extensive use for actual production in half a dozen European countries. We believe it to be the long-sought answer to the search for increased speed, simplicity, control and quality in economical color reproduction,

The AUTOSCAN is basically a fine reproduction camera. In place of lamp illumination, it employs an electronically-controlled pinpoint scanning light. Color copy, up to 24"x 24", is scanned by this dot, rapidly and closely. The light dot reads the copy in horizontal sweeps, 120 times to the inch. These overlap, so that the exposed negative has no lines whatever.

The AUTOSCAN works directly from reflective color originals, automatically correcting for proper ink and paper balance in each color. No masking or balanced negatives are needed. The brightness of the scanning light is varied by photocells and electronic circuits, compensating and correcting automatically for the desired contrast and definition, for screens and filters, and for quality results in the end reproduction process: lithography, letterpress or gravure. Settings are quickly and easily made or changed to meet varying ink, paper and other requirements.



The AUTOSCAN actually retouches with light, achieving truer color reproduction than has ever before been possible. Grey scale control is finer and black can be eliminated from pure color areas. It will enlarge up to 1.5 times and reduce to $\frac{1}{3}$, working with tone, line and combinations. Register is automatic. Hand work and correction are reduced an average of 80 per cent.

Because the AUTOSCAN is basically a reproduction camera, not an electronic device, its principles and operation are familiar to any competent cameraman. The simple controls are quickly mastered. Once these controls are set, operation is automatic, and the possibility of human error is reduced to a minimum.

Please write for literature on the AUTOSCAN, giving full details and specifications.

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180 VARICK ST., NEW YORK 14, N.Y. ■ 1350 SO. BROADWAY, LOS ANGELES 15, CAL. ■ 608 SO. DEARBORN ST., CHICAGO 5, ILL.
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Cover

Accelerated product storage tests are conducted in this "hot room" of the Rheem container laboratory. Here new products from customers are stored in laboratory test units which have been coated with various container linings, and are exposed to carefully controlled elevated temperature conditions. This type of testing enables Rheem to predict lined container behavior in actual use with a high degree of accuracy and without the need for excessively long field test programs. (See page 63.)

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MODERN LITHOGRAPHY

VOLUME 28, NUMBER 8

AUGUST, 1960

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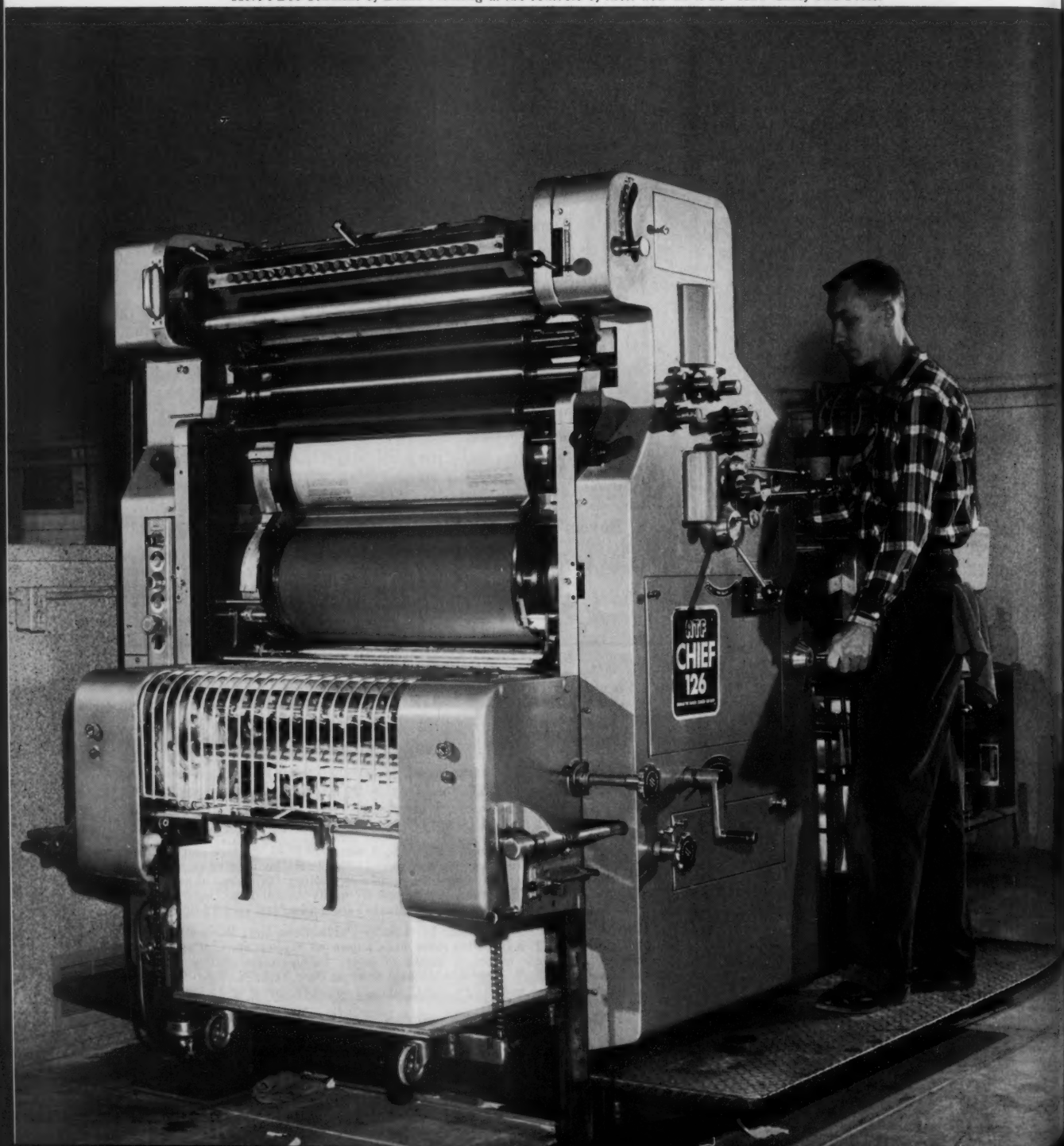
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**"Our only complaint is that
ATF didn't come on the market
sooner with**

Here's Bob Schmidt of Didde Printing at the controls of their new 20 x 26" ATF Chief 126 Press.



DIDDE

Office Supply and Printing Inc.
24 WEST SIXTH AVENUE • EMPORIA, KANSAS

the Chief 126"

June 1, 1960

Mr. A. L. Roberts
American Type Founders
210 West 8th Street
Kansas City, Missouri

Dear Al:

Thought you might like to know how our new Chief 126 is working out.
We're sold on it!

Depending on the stock, we're running between 7500 and 8000 IPH--and feel that this is a "comfortable" speed range, both for the press and the pressman.

On a series of religious books we do, it used to take us 28 hours to turn out an average run of 2,000 books using our old 14 x 20 press. Now, on the Chief 126, we get 2,000 books in 12 hours--and save folding and gathering time, as well as press time.

Another recent job required four different plates, and called for printing 25,000 impressions from each on 17 x 22" 16 lb. bond. The whole job (including ink-up, wash-up and all makeready) took us just 24 hours--an average of 33,000 impressions per working day.

We are amazed at the consistently high production we're getting, job after job. We average well over 30,000 impressions per day, and under the right conditions often go over 40,000.

Our only complaint is that ATF didn't come on the market sooner with the Chief 126!

Sincerely yours,

DIDDE OFFICE SUPPLY & PRINTING INC.

Bob Schmidt

Bob Schmidt
Production Manager

BS:rm

*To: ATF Home Office
No other comment required!
ALR*

Write for illustrated, descriptive literature
and specifications on the ATF Chief 126.

ATF

American Type Founders

200 Elmora Avenue,
Elizabeth, New Jersey

ATF Type Faces used in this advertisement: Craw Clarendon, Garamond



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Model 58 is a "push button automatic" press, with all fingertip controls on one central panel. It has the new positive vacuum tape delivery system and stepless speed electronic drive. Model 58 has everything you've been looking for in a screen process press as a partner for your litho equipment . . . why not investigate right away?



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moderately priced
coated cover stock for
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superb foldability

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apco

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Apco HI-FOLD Cover, in White only, basis 80# and 95# is carried in stock in these sizes and weights:

20 x 26 — 160M, grain long	20 x 26 — 190M, grain long
23 x 25 — 248M, grain long	23 x 35 — 294M, grain long
28 x 35 — 248M, grain short	23 x 35 — 294M, grain short
26 x 40 — 320M, grain long	26 x 40 — 380M, grain long

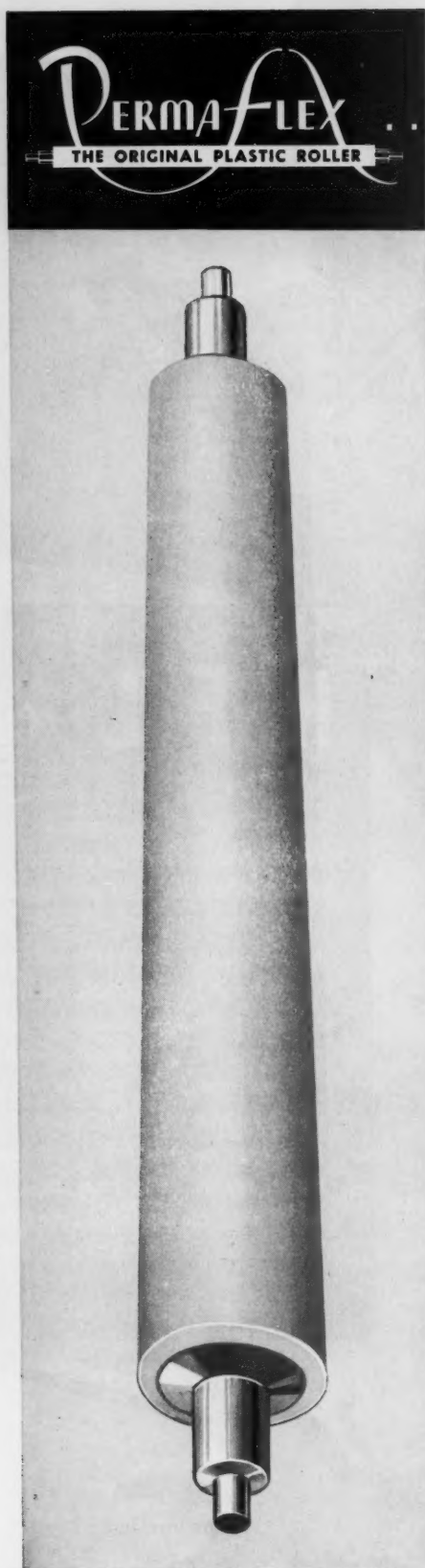
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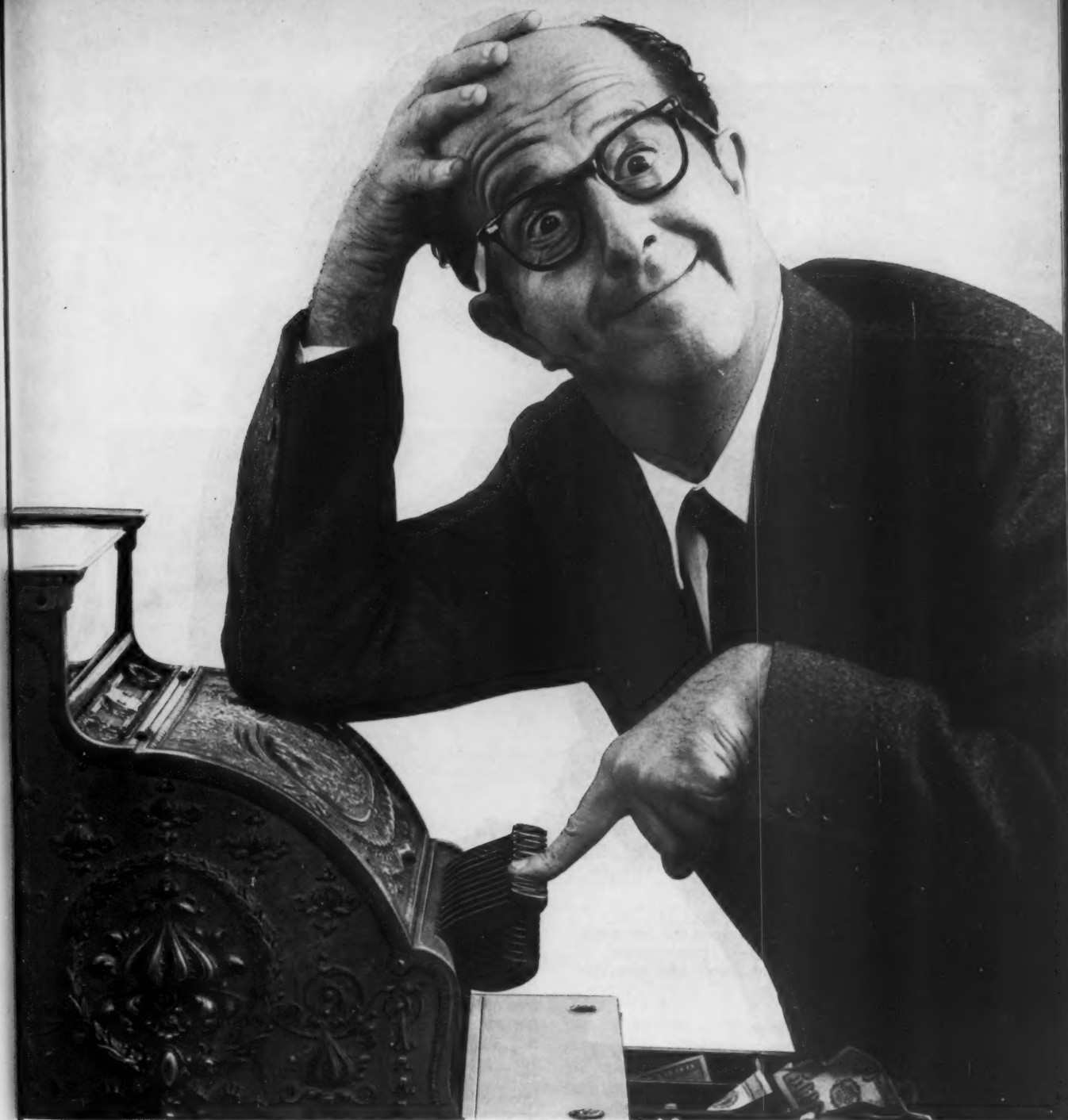
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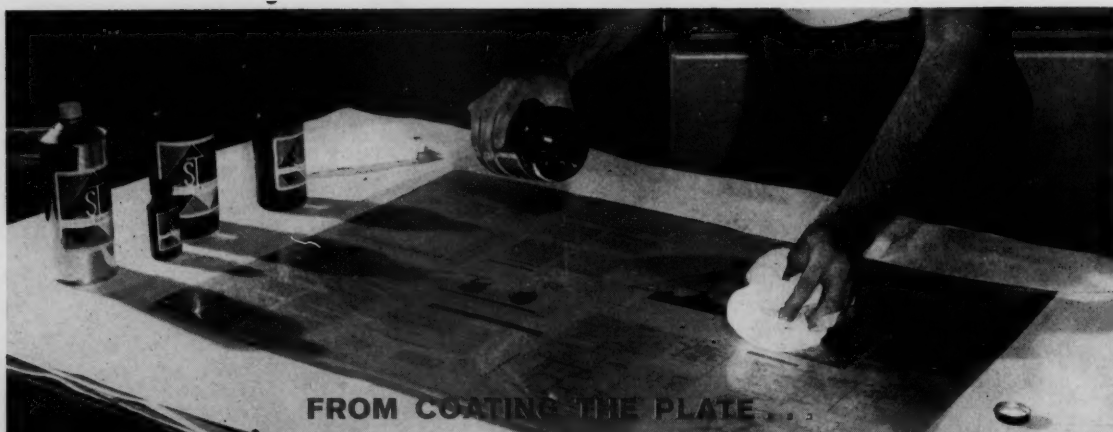
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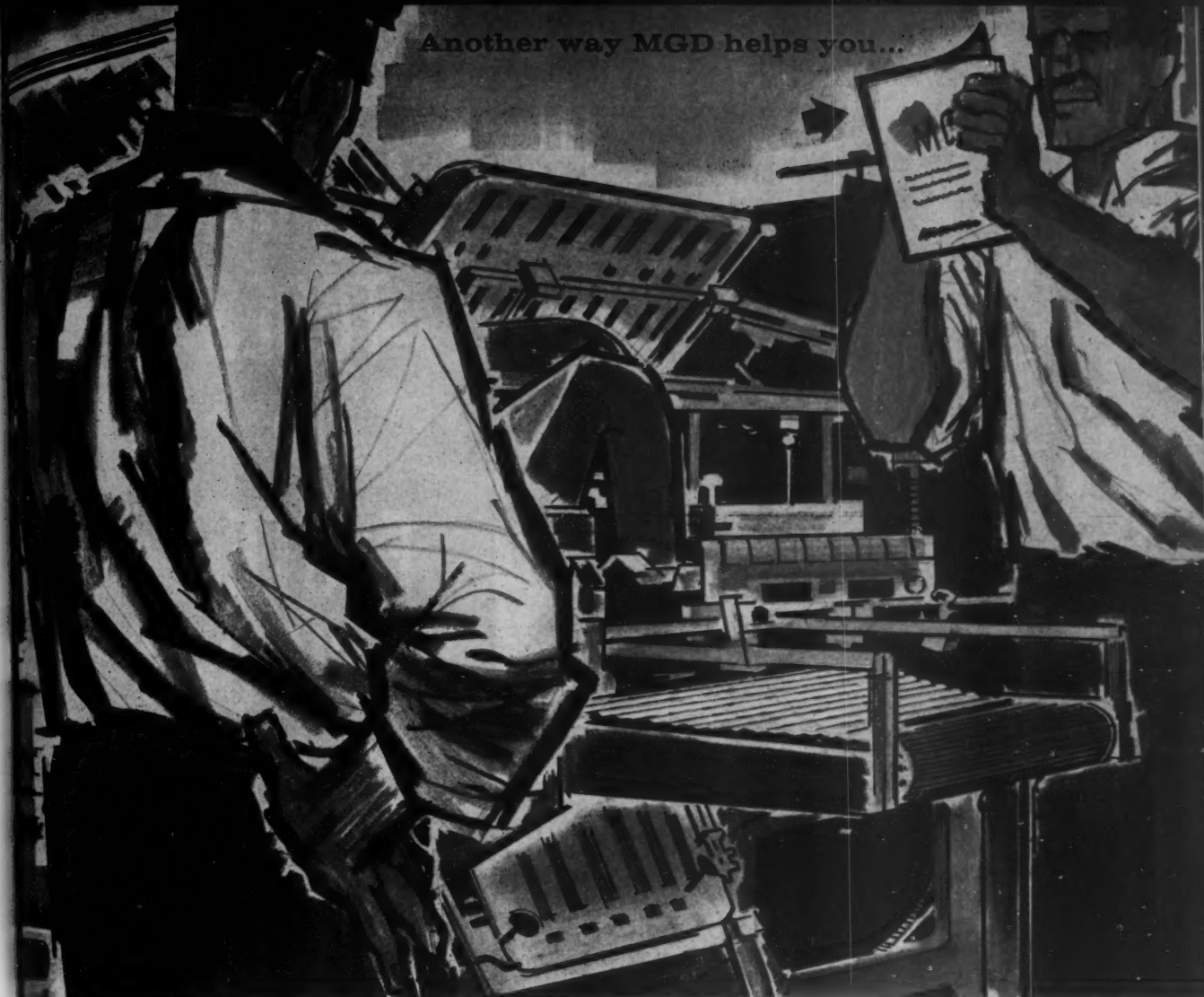
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Don't risk spoiling beautiful printing jobs with uneven or inaccurate folding. Do as most trade binders do... install the one folder that combines precision accuracy, economical operation and ever ready dependability. *Install Dexter!*

Throughout the world Dexter Folders have been doing the job so well for so long that they've become famous everywhere as the "choice of the pros." Experience, sound design, craftsmanlike construction are just some of the reasons.

So are the production advantages found in every model from Dexter's new 14 x 20" WS to the big 76" Blade & Buckle: automatic sheet register...scuff-proof continuous air wheel feeder...ball-type side guides...self-adjusting fold rollers...swinging deflec-

tors on all fold plates...micrometer fold plate adjustments...precision scoring, slitting, perforating and optional pasting...broad range of impositions...high speed operation...simplified controls for fast set-up and changeover.

Dexter precision quality costs more, but the money you save with high speed, trouble-free operation puts you dollars ahead in the long run...makes satisfied customers, too. The pros fold for profit...that's why they install Dexters. Why don't you?

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Division of Miehle-Goss-Dexter, Inc.

Chicago 8, Illinois



WASH R228 Wash & Conditioner with Resilium



- Go from dark to light ink in 1 step.
- Remove ink glaze as it cleans and conditions rubber rollers and blankets.
- For letterpress and offset equipment.

NON-TOXIC • NON-DAMAGING



Packed: 1 & 5 gal. cans; 30 & 55 gal. drums

VELVEE Rubber Rejuvenator



- Break the Gum-Glaze Barrier fast!
- Rejuvenate rubber rollers and blankets instantly!

- Restore tack to composition and pull rollers quickly.

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Packed: Four-Paks and Cartons of 4-Four-Paks

RONOLENE Blanket & Roller Wash



- Treat blankets daily with the wash that really cleans and retards ink glaze. Excellent for rollers too!
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- For offset, duplicating and letterpress.



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LITHO SOLVENT Press Wash



- Most economical daily cleaner for letterpress, litho, box and carton plants.
- Cleans all composition, rubber, vulcanized oil, plastic and metal rollers, plates, type and blankets.



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_____ Carton(s) of 4-Four-Paks

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Try this great new material today. Anso, Binghamton, New York, A Division of General Aniline & Film Corporation.

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Plestar

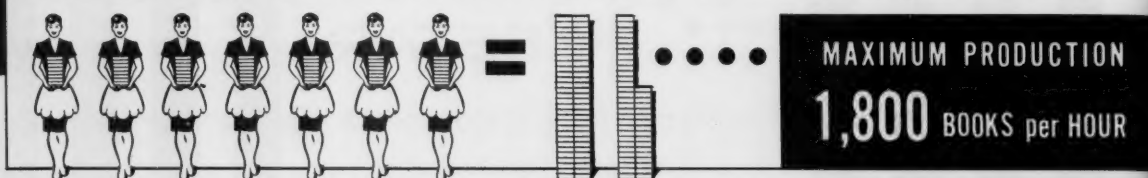
Automate

YOUR SADDLE-STITCH BINDERY with the Consolidated-Mueller AUTOMATIC BINDERY

FOR INSTANCE . . A saddle-stitch book with 3 signatures and a cover requires 7 people to produce the completed job: 4 girls to feed the signatures on the gathering chain, manually, 1 girl to remove the signatures from the stitcher, 1 man to cut and still another to remove the finished job from the cutter.

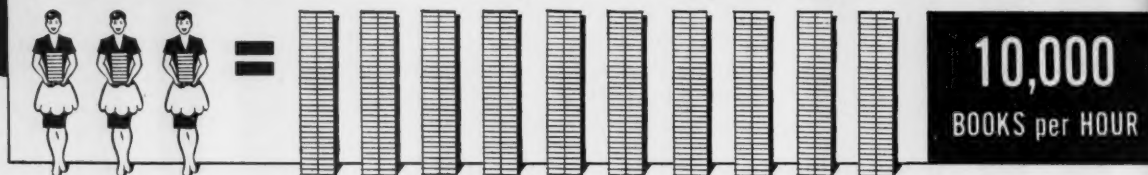
7

Seven Bindery girls, operating a hand-fed gatherer, stitcher and cutter, produce a maximum of 1,800 books per Hour !



3

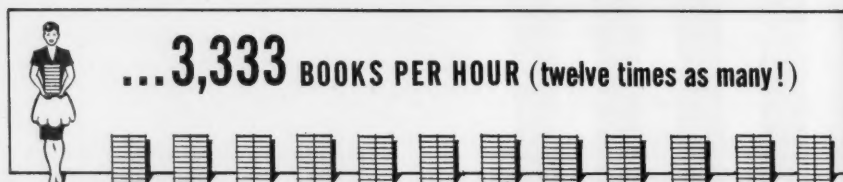
Three girls, with a Consolidated-Mueller Automatic gatherer, stitcher & 3 knife trimmer, produce up to 10,000 books hourly!



COMPARISON OF HOURLY PRODUCTION PER GIRL . .



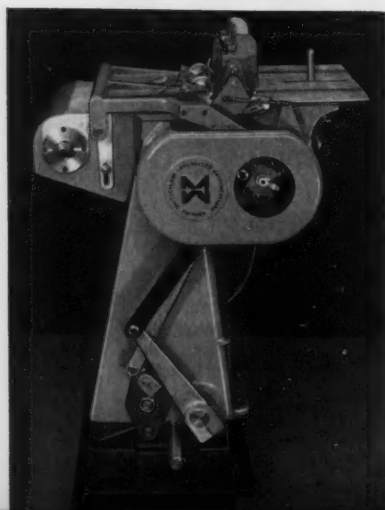
HAND - FED BINDERY



WITH THE CONSOLIDATED - MUELLER AUTOMATIC BINDERY

Over twelve times more production, with greater ease and less effort, with the Consolidated-Mueller Bindery and Automatic Girl-Feeders!

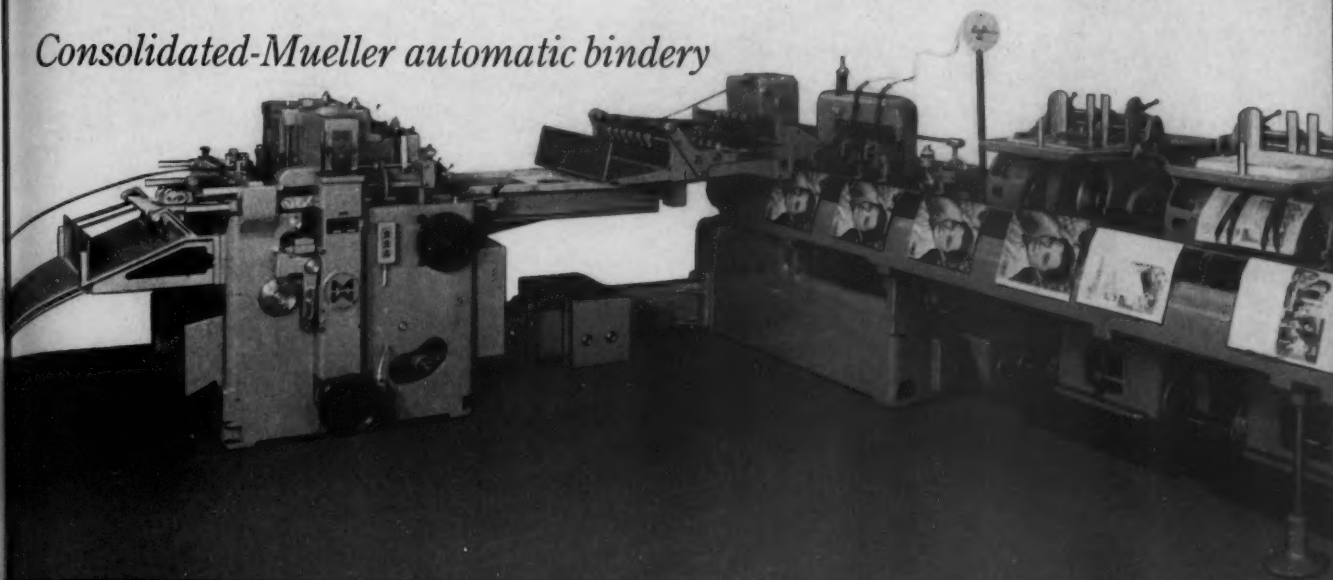
The Consolidated-Mueller "E-3" High-Speed Automatic Feeder, shown at left, will handle signatures of all types, with or without overlap and with either open or closed head. It has a built-in vacuum system as well as a mechanical gripper and is easily the most efficient and versatile universal feeder in the world today.



WRITE, WIRE OR PHONE FOR COMPLETE DETAILS AND BROCHURE

Improve your Competitive position, make tremendous Savings
and give better Service... for a Small Monthly Investment !

Consolidated-Mueller automatic bindery



This Complete Automatic Saddle-Stitch Bindery

is priced within the budget of every Plant !

The Consolidated-Mueller Automatic Bindery is of unit construction and can be installed on a unit basis to meet your growing demand for automatic saddle-stitch work. The new Consolidated E-3 Feeder and bindery is now in operation in scores of plants throughout the world, meeting every condition and all types of work, folded with, or without, overlap. Being of the latest design, it has, built-in, all of the outstanding features of automation bindery

equipment. Users are outstandingly enthusiastic. Personnel enjoy working with the equipment. The simplicity of setting the machine from one size job to the other and the ease with which this machine handles the various sizes and grades of stock makes this bindery very versatile for runs as short as 1000 booklets or runs as long as 500,000. Write, wire, investigate, or ask us where you can see a Consolidated-Mueller Bindery in operation.

SPECIFICATIONS	E-3 Feeder	JG Hi-Speed Stitcher	3-Knife Trimmer	Complete Automatic Bindery
Maximum size	12½" x 18"	12½" x 18½"	12½" x 18"	12½" x 18"
Minimum size	3½" x 6"	2" x 3"	3½" x 5½"	3½" x 6"
Floor space (4 stations)		5½' x 21'	39½" x 95"	10' x 21' (L shaped)
Speed: single production . . . 8,000 to 10,000 Duplex production . . 12,000				
Power required for fully automatic plant with 4 feeders: total HP 6				

CONSOLIDATED INTERNATIONAL

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mixing

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Now, Chemco introduces a pre-mixed, liquid, two-part formaldehyde developer concentrate ready for immediate use by simply adding it to water. Packaged in unbreakable 5-gallon Cubitainers. All you do is place container on shelf and draw off A and B concentrate as needed. No more dissolving powders with possible errors in formulation. No double handling. As developer is used, container collapses eliminating aerial oxidation and insuring unlimited shelf life.

Add undiluted Powerlith Concentrate to replenish tired developer, thus making one bath last an entire shift. One set of A and B 5-gallon containers makes 20 gallons of developer. Order a supply today, plus Chemco Power-Fix to complete your darkroom changeover.



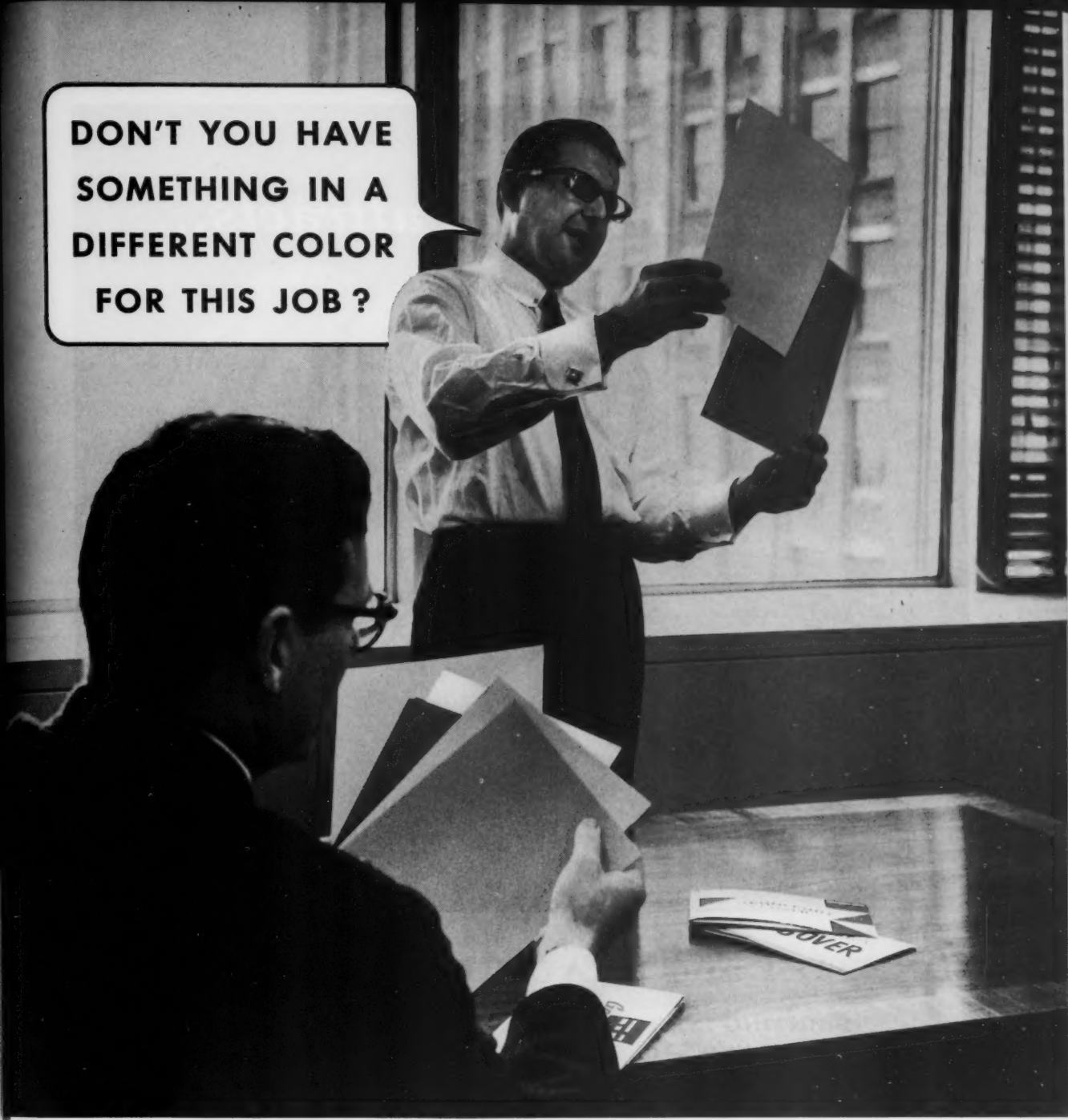
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DIFFERENT COLOR
FOR THIS JOB ?**

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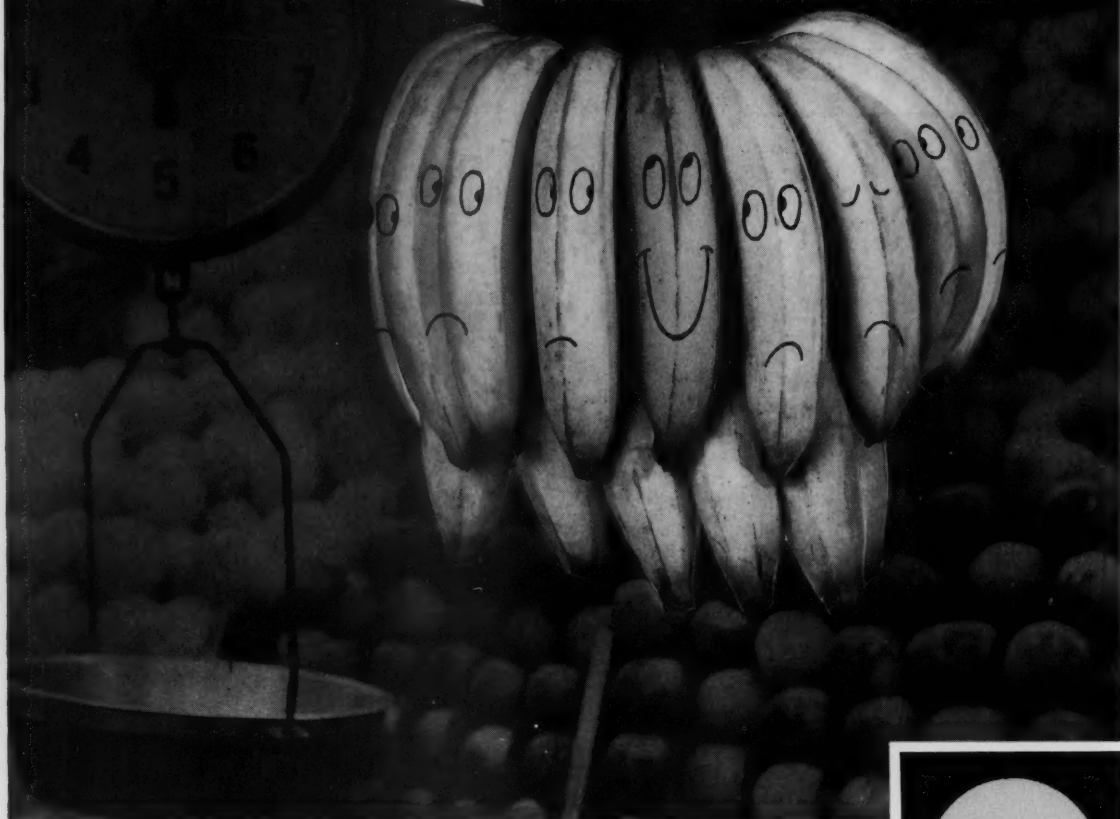
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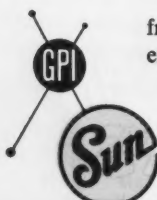


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That's why it's so important to use the right printing inks—right in color, right in quality, right in cost, and right in performance. Inks that will do a good job both on the press and on the end product.

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TRADE MARK

Now there are 6 Kodak graphic arts films on Kodak Estar Base

Here are three new additions to the Estar Base series:

KODALITH PAN FILM. Now on size-holding 4-mil Estar Base. For making perfectly registered, direct-half-tone color-separation negatives from color copy. The improved emulsion yields higher speed and better dot quality than any comparable product.

KODAK PAN MASKING FILM. Now on 7-mil Estar Base for accurate register and handling ease. Ideal for preparing color-correcting masks in the camera-back masking technique for reflection color copy.

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Your favorite Kodak dealer now has all the films pictured. Use them when you want performance to live up to your expectations.

Kodak Estar Base: Kodak's own polyester support—flat-lying, flexible, optically clear, kink-resistant—with built-in anti-Newton-ring properties. Built to resist moisture penetration, Estar Base dries rapidly. The repeated wetting and drying of dot etching will not affect it.




Our new movie, "How Kodalith Film Is Made," is the one you wanted us to make. You can get it by writing us.

Graphic Reproduction Sales Division > EASTMAN KODAK COMPANY, Rochester 4, N. Y.

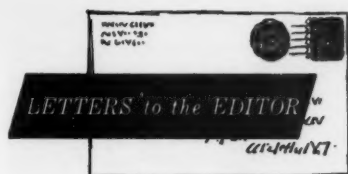
20—count 'em—20 big reasons why leading lithographers choose famous 3M Type "R" Photo Offset Plates for 3 out of 4 jobs! Why don't you, too?

Easier handling because of lighter weight . . . superior registration because of "zero" stretch . . . cleaner runs because oxidation has no adverse effect . . . safer to use because they can be run without bichromate . . . longer shelf life . . . no dark-room needed . . . no dark reaction . . . no continuing reaction . . . constant exposure time . . . no gumming for shutdowns . . . may be stored indefinitely . . . not

affected by heat and humidity . . . perfect dots . . . better solids from less water . . . easier desensitization, residual coating is not trapped . . . less ink and water used . . . truer color fidelity . . . no shop coating . . . no variables and inconsistencies . . . you save time and money. All big reasons why you will like these famous plates!

3m  **PRINTING PRODUCTS DIVISION**





Information on Misomex

Dear Sir:

In the Equipment and Supply section of MODERN LITHOGRAPHY, I read the article on the "Misomex Step-and-Repeat" machine.

Would you please pass this note along to the distributors, Royal Zenith Corp., of New York, asking for whatever information or literature may be available? Thank you.

The Engvis Co.

Bob Engle,

Your request for information has been forwarded. — Editor.

Story from Russia

Lee Augustine, that inveterate world traveler, has made it his custom in recent years to send hundreds of his friends in the graphic arts a series of picture postcards from his various ports of call, with messages about sightseeing, graphic arts plants etc. We enjoyed a recent series of colorful cards from Lee, including one from Russia, but we had no idea of all

the work that went into that little message from behind the Iron Country. Following is Lee's account of his frustrating, but amusing battle against bureaucracy—Soviet style.

Dear Sir:

You may be interested in knowing that the cards that I sent my friends from the U.S.S.R. resulted in their being a labor of love. It has always been possible for me to make prior arrangements for the handling of my cards in all of the Western European countries. I have had my stickers made up in advance and sent to postcard publishers in each of the countries in which I am planning on visiting. Each publisher would affix my stickers and put on the required amount of postage. I recommend where more than one stamp can be used to make up the required amount of postage that multiple stamps be used or if a commemorative stamp is available at the time, that it be used. The cards are usually awaiting me at my hotel upon arrival. I personally put the message on the cards and also personally mail them.

Such advance arrangements were not possible in the U.S.S.R. I took along with me a set of stickers, hoping that I might possibly mail my friends a postcard from the U.S.S.R. On the first week day of our

visit, I explained to our guide and interpreter that I had 1,685 stickers which I would like to affix to that many postcards and mail to my friends in the U.S.A. and Canada. When she finally was convinced that I meant it when I told her that I wanted to mail that many postcards, she then agreed to help me get the necessary postage stamps and cards.

We went to the main post office in Moscow and after waiting in line at a stamp window, she told the stamp clerk in Russian that I wanted 1,700 Forty Kopek stamps. That was the value of the stamp needed to mail a postcard by ordinary mail to the Western Hemisphere. After some conversation in Russian, the stamp clerk was convinced of the quantity of stamps that I wanted. Then began a series of consultations. It so happens that the U.S.S.R. continually issues commemorative stamps of the Forty-Kopek denomination. This is the same denomination stamp that is used to send letters within the Soviet.

Because they issue so many commemorative stamps, the post office has a rule that no one can be sold more than ten stamps of any one issue at any one time. Usually stamp clerks have available three or four different issues which are sufficient to take care of most of their requests. Because I had my stickers with me, I was able to

Your 3M lithographic supply dealer has the complete performance story!

It's one thing to read the words in an advertisement . . . it's another to see these words in action right in your own shop. Those words on the opposite page, for instance. There are some pretty strong claims in those words. We ask you to believe what we say about 3M Brand Type "R" Photo Offset Plates. But you don't have to.

Actually, we'd much rather you wouldn't take our word for how good, how consistent, how dependable these plates are. We'd much rather you would get in touch with your nearby 3M lithographic supply dealer and ask him to come over and prove our words. We're confident he can do it to your satisfaction. Call him now. Or mail the coupon.



PRINTING PRODUCTS DIVISION

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● MANUFACTURING COMPANY
● Dept. PBI-80, St. Paul 6, Minnesota
● Will you please arrange for a demonstration of 3M
● Brand Type "R" Plates in my own shop.

● NAME _____

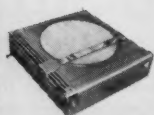
● TITLE _____

● COMPANY _____

● ADDRESS _____

● CITY _____ ZONE _____ STATE _____

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Hamilton Formliner



Artist Retouch Tables



Dot Etching Tables

From the world's
foremost line of
lithographic
equipment...

The Hamilton Layout Table

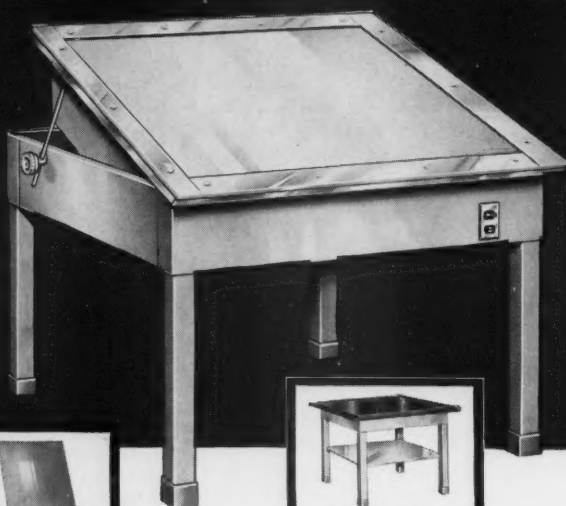
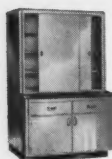


Plate-Roller Trucks



Deep Etch Tables



Pacemaker
Storage Cabinets

Features that cut time, insure accuracy

Precision working surface of glare-and-reflection-free, double-strength laminated glass—with built-in plastic diffuser. Adjustable squaring bars in chrome-plated steel—framing the glass. Illuminated by instant-starting fluorescent tubes—housed in exclusive shallow reflector (allows more leg room). Legs can be individually leveled. Top tilts to 30 degrees from horizontal. Five sizes: two tilting, three horizontal.



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new dimensions in time and
space efficiency for: the physician,
the dentist, the draftsman, the printer,
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convince the individuals at the Moscow post office through my interpreter that I actually had need for that quantity of stamps. After a series of consultations with postal supervisors, they agreed to have their stock room get me 10 stamps from each Forty Kopek issue that they had available. After another wait, a clerk came from the stock room with 10 stamps each from 63 different issues of the Forty-Kopek stamp. I had hit a stamp collector's jackpot! From that point on, it was necessary that Mrs. Augustine and I visit as many post office branches as possible, buying the limit permissible for Forty-Kopek stamps depending upon how many different issues that particular post office had on hand.

Finding the Cards

That was not all. After a couple days of accumulating stamps toward my goal of 1,700, Mrs. Augustine suggested that I had better see whether I could get that many postcards. We had been busy in the meantime sightseeing and concentrating on obtaining Forty-Kopek stamps. Our guide took us to a large stationery store where we were shown different selections of postcards. I selected one packet containing 20 cards and told the interpreter that I wanted to purchase 88 of those packets. The clerk told our interpreter she questioned whether she could sell any one person that many cards and, as with our stamp experience, there developed a series of consultations. It finally ended up that the supervisor in the store decided there would be no harm in selling me 88 packets of those postcards.

Licking the Stamps

Mrs. Augustine and I then spent time each day putting on our address stickers and stamps and also our message. We were able to mail about 600 cards from Moscow. We completed the job in Leningrad. We took the approximately 1,100 cards down to a mail box near our hotel in Leningrad to mail them. The mail box had about a 1/4" slit in it for the insertion of mail. That meant that we could put only a few postcards in the mail box at a time. Before we had many cards in the mail box we had a number of Russians standing around us, watching us. They evidently had never seen any one mail so many postcards and, as the crowd increased, Mrs. Augustine became concerned. She suggested that we not mail the balance of the cards and finish our mailing the next morning. However, we did complete mailing our cards with a crowd of Russians standing around us.

I thought that this would be of interest to you.

Lee Augustine,
President, Printing Machinery
Co., Cincinnati



Smooth as a summer breeze, but about 600 mph faster. That's the KLM Royal 8 jet, now flying non-stop New York to Europe. And the Dutch see to it that every fleeting moment is extra special, even for the tiniest passengers. It's part of the personally efficient service you always get on KLM. Reserve now, First or Economy Class. See your travel agent (professionals plan better trips). Or call the nearest KLM office. KLM Royal Dutch Airlines, 609 Fifth Avenue, New York 17, N. Y.

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are always on the move . . .

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**NEW PRODUCTS and the improvement of old ones...
to make it easier to produce BETTER LITHOGRAPHY**

**THE NEWEST
LITH-KEM-KO
DEEP ETCH
ALUMINUM ETCH
NO. 3013H**

A completely new etch for use on all lithographic aluminum plates!

Check these features:

- ① Does not contain any iron compounds, which can cause troublesome iron residue, particularly when copperizing.
- ② Positive and even etching renders image completely receptive to copperizing solution or lacquer.
- ③ Can be used successfully on all types of aluminum plates — conventional ball-grained plates or brush-grained plates which have been chemically treated or anodized.
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LITH-KEM-KO ALSO SUPPLIES FINE CHEMICALS FOR SURFACE COATED, DEEP ETCH AND COPPERIZED ALUMINUM OFFSET PLATES

Engeberg Joins Hennage

Hennage Lithograph Co., 9th and Kearney Streets, N.E., Washington, D. C., has appointed Stanley M. Engeberg as sales manager.

A graduate of the University of Maryland, Mr. Engeberg has been associated with the printing industry for eight years. He formerly served as production planning manager of the Darby Printing Co.

Kelley Opens KC Office

Cliff Kelley Direct Mail Inc., St. Louis, has opened a new office in the Merchandise Mart Bldg., 2201 Grand Ave., Kansas City. It is the first branch to be opened by the company which was founded in 1954 by Mr. Kelley.

Robert V. Riggs, who has been employed for ten years in the direct mail field in Cleveland, has been appointed manager of the Kansas City branch. His office will be at the Grand Ave. address.

Meetings

International Association of Printing House Craftsmen, annual convention, Hotel Biltmore, Atlanta, Aug. 7-11.

35th Annual Conference on Printing Education, International Graphic Arts Education Association, Houston, Tex., Aug. 14-19, 1960.

Printing Industry of America, 74th annual convention, Sheraton Park Hotel, Washington, D.C., Oct. 24-27.

National Association of Photo-Lithographers, 28th annual convention and exhibit, Hotel Conrad Hilton, Chicago, Oct. 5-8.

National Metal Decorators Association, 26th annual convention, Shoreham Hotel, Washington, D. C., Oct. 17-19.

Lithographers and Printers National Association, annual convention, Arizona Biltmore Hotel, Phoenix, Ariz., April 30-May 3, 1961.

Web-Offset Section, PIA, annual meeting, Edgewater Beach Hotel, Chicago, April 19-21, 1961.

National Association of Litho Clubs, 16th annual convention, Dayton Biltmore Hotel, Dayton, O., May 4-6, 1961.

Research & Engineering Council, annual convention, Fort Des Moines Hotel, Des Moines, Ia., May 22-24, 1961.

Technical Association of the Graphic Arts, 13th annual meeting, Hotel Deshler-Hilton, Columbus, O., June 12-14, 1961.

ALA Bid Rejected

Lithographic workers at 11 Houston plants have voted to keep the Houston Printing Pressmens and Assistants Local 71 as bargaining agent, rejecting a bid by the Amalgamated Lithographers of America.

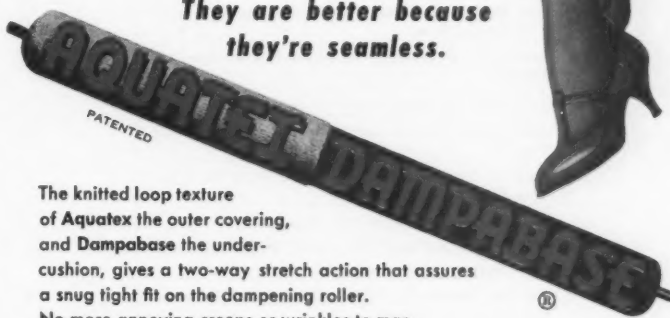
The results of the election, held last October, did not become final until last month when an NLRB examiner opened five challenged ballots which made the total 31 to 28 for the incumbent union.

The outcome of the election had hinged on the five contested ballots, which were the subject of an NLRB hearing. The hearing determined whether the votes in question were cast by workers actually performing lithographic duties.

The A.L.A. first held a 28 to 26 margin, and had contested seven votes cast. The NLRB upheld two challenges, but ordered the others counted in the final tally, which resulted in the IPPAU victory.

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LIKE A
STOCKING
... FITS
LIKE A GLOVE**

*They are better because
they're seamless.*



The knitted loop texture of Aquatex the outer covering, and Dampabase the under-cushion, gives a two-way stretch action that assures a snug tight fit on the dampening roller.

No more annoying creeps or wrinkles to mar sharp clear impressions. They are easy to apply to the roller—just pull on like a stocking and they fit like a glove.

Order your supply today from your lithographic supply house. Remember Aquatex and Dampabase can be purchased in cut lengths to fit any size roller, and the ends are equipped with drawstrings or grommets and laces to eliminate the time consuming chore of sewing.

Owner-distributor of the Moreland Corp. manufacturer of rubber rollers for lithograph presses.

GODFREY ROLLER COMPANY

Roller makers for 95 years

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"MUST" INFORMATION WHICH CAN BE YOURS

Here is a partial list of some of the material the NAPL issues to its members. We suggest that you check the items that you would like to have and join the NAPL to secure all of the items and more

Join today so you can secure these values from NAPL tomorrow

Check below, ✓	Check below, ✓
1. Billing for Over or Under Runs—A lithographic industry survey (4 pp)	32. Outlining the Functions, Responsibilities, Authority and Operational Activities in a Lithographic Plant
2. Paint Color Selector with swatches of color (12 pp)	33. Wage Scales, Working Conditions and Complements of Lithographic Press Help in 49 Cities
3. Simplified Estimating Manual (10 pp)	34. An Employee Suggestion Plan—Form Outlined
4. Estimate Register and Salesman's Daily Report	35. Job Definitions of Litho Workers—A source file of information on (5 pp)
5. Spraying Equipment Survey (3 pp)	36. Profit Sharing Plan for Lithographic Employees
6. Advertising Suggestions for the Lithographer	37. Survey on Compensating Exempt Salaries Personnel for Overtime
7. Preventive Maintenance for Small Plant (15 pp)	38. Work Simplification, a 36 page illustrated booklet
8. Sales Training Ideas—by Walter E. Soderstrom	39. Should We Rent or Build New Quarters? (4 pp)
9. Building a New Plant—Source material (48 pp)	40. Survey on Depreciation, Pattern of NAPL Members
10. Workable Sales Control for the Medium and Small Size Lithographer (4 pp)	41. Survey on Desirability of Running Work on Two Color versus a Four Color Press (3 pp)
11. Rates of Expenses to Sales—Small, Medium, Large Plants (4 pp)	42. Survey—Is a Coffee Break Desirable?
12. Legal Year-end Adjustments that may Benefit the Lithographer (4 pp)	43. Survey on Work Spoilage in Lithographic Plants
13. Advertising and Selling Lithography (4 pp)	44. A Survey of Wages and Fringe Benefits of Superintendents, Foremen, Estimators, etc.
14. Analyzing, Selling, Production and Management in the Lithographic Plant (9 pp)	45. How We Run the Planning and Scheduling Department (4 pp)
15. Sales Conference Agenda Outlined (11 pp)	46. Blind Copperized Aluminum Plates
16. Building and Directing a Sales Force	47. Trade Custom Precedent—Ownership of Lithographic Plates and Negatives (7 pp)
17. Contract between a Salesman and the Company	48. Trade Custom Precedent—Color Variation on a Job
18. Sales Contract Outlined—How to Sell Standard Work on an Annual Basis	49. Trade Custom Precedent—Liability for Mistakes and O.K.'ing Proof (2 pp)
19. Survey on Compensating Salesmen and Marking Up Material	50. Trade Custom Precedent—Limitation of Rejection of Goods (2 pp)
20. Operating a Lithographic Sales Program (28 pp)	51. Trade Customs of the NAPL
21. Long Range Planning and Marketing a New Service (5 pp)	52. Trade Customs—Basic Information for Use in Setting Up (5 pp)
22. Proforma Contract Set Up for Selling Price List Work on an Annual Basis	53. Handling the Extra Charges which develop on a Job
23. Accounting and Cost System for Lithographers	54. Insurance Coverage—How to Check (12 pp)
24. Building Budgeted Hourly Cost Rates in a Lithographic Plant (76 pp)	55. Insuring Customers' Property
25. Production Standards for Offset Lithographic Equipment and Operations (24 pp)	56. Photographing of Money, Stamps, Obligations and Securities of the United States (4 pp)
26. Forms Book showing forms actually in use in many lithographic plants (Heavy binder carries forms—available on loan basis, only)	57. Management's Opportunities and Musts
27. Submitting a Printing Estimate—a good form	58. Should We Give Our Financial Statements to a Rating Agency? (4 pp)
28. Plate Cost Estimating Usages	59. Motion Picture and Film Strips on Graphic Arts
29. Purchasing Procedure Reviewed (7 pp)	60. Manual of Lithographic Company Policies
30. Production Control in a Lithographic Plant—16 pp Booklet showing forms filled in	61. Reproducing Copyrighted Material
31. How We Run the Planning and Scheduling Department (4 pp illustrated)	62. Management Techniques for Improving Sales Performance—a series of papers
	63. Depreciation from Cost and Tax Viewpoints
	64. Successful Advertising for a Lithographing Company (4 pp)
	65. Let's Make a Sales Budget (4 pp)

NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS
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KNOW IN ADVANCE THAT YOUR PACKAGE PRICE INCLUDES THE FOLLOWING:

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Phone or write for complete information. Our 16 mm sound and color film, 25 minutes in length, is available at no charge for group showings.

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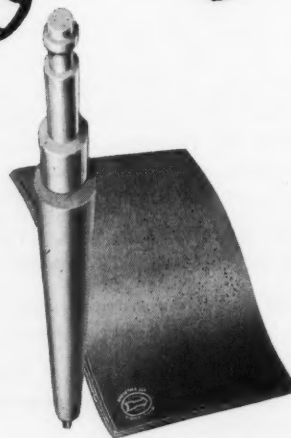
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EDITORIALS



'Let's Have an Exhibition'

ONE of the most controversial subjects in the graphic arts field these days is the question: "How often should equipment exhibitions be held?"

There are several dominant opinions on the subject, representing the viewpoints of the equipment manufacturer, the trade association and, of course, the plant owners and others who *attend* such exhibits.

The attitude of the suppliers is not unanimous, by any means. Many suppliers, particularly those with light-weight, easily transportable displays and products, like to be in as many trade shows as their budgets will permit. The heavy equipment folks, on the other hand, are pretty generally bearish on the subject, because of the understandably high cost of shipping and then erecting huge presses, cameras, etc. The feeling among this group seems to be that exhibits of really big equipment should be widely spaced—something like 10 years apart—and that smaller shows should be kept to a minimum.

Trade associations see in exhibits a chance to present an attractive and educational adjunct to an annual convention. And, of course, such exhibits generally account for an appreciable amount of income for the associations.

The average man in the shop, as a general rule, likes to attend these exhibits, if he can be assured that the equipment and supplies on view are really new and of value to him. Some firms make it a practice of sending all the key personnel to such events.

For some time there has been a rumble of discontent among some equipment manufacturers about the growing number of exhibits planned for meetings in the graphic arts field, which has come to the surface in the comments by Harry L. Gage, secretary of the National Printing Equipment Association, in this issue (page 34). Mr. Gage makes

some forthright comments on the recent history of equipment exhibits, particularly the large expositions that have been held once a decade since the 1920's. Comments of several association executives countering some of his views, are appended to his report.

ML has no very strong feelings about equipment exhibits, at least as far as how many and how often. It does seem redundant to emulate the European idea of having large trade fairs every year. Our marketing and distribution methods do not require such a frequent schedule.

On the other hand, there is some merit in the argument that trade shows should be presented more frequently in this jet age, to keep printers and lithographers up-to-date on the rapidly developing trends in the industry. Certainly the pace of really new developments has quickened since World War II.

Perhaps the man in the shop is the best regulator of trade exhibits. When he stops attending such exhibits—and stops ordering equipment and supplies—it will no longer be profitable for the suppliers to rent booth space, erect displays and take the time of salesmen and managers.

The psychological factor which affects this basic rule of supply and demand in this instance, of

(Continued on Page 111)

Quote of the Month

'Developing modern management . . . is a do-it-yourself proposition—it can't be bought. In nearly all cases, we must educate and train ourselves. We must gain knowledge so that we may train better—therefore manage better and in the process develop better management'—
Harry T. Gardner, Wm. G. Johnston Co. (See Page 36)

DISSATISFACTION, on the part of some manufacturers of graphic arts equipment, particularly those who make large presses, cameras, etc., with "too frequent" trade exhibitions has recently been noted in our industry. A number of supply firms have complained about the cost of shipping and erecting complex equipment and of tying up sales and executive time for the project. This month the subject comes to the surface in a statement from Harry Gage, who emphasizes that "it is NOT a statement by the National Printing Equipment Association itself, although many of our members share the beliefs stated."

ML asked PIA and NAPL to comment on this statement. Their comments follow Mr. Gage's presentation. ML feels that exhibits should be considered on their respective merits, not out of any sense of "obligation." (See editorial, page 33). It is to be hoped that supply firms will examine exhibits on this basis, without thought for any sort of boycott, which, of course, would be abhorrent to everyone in the industry.

NPEA:

'Let's Have an Exhibition'

By Harry L. Gage

Secretary
National Printing Equipment Association

"LET'S organize an equipment exhibition for our next convention"—that stimulating idea has been proposed by trade association executives and organization leaders at frequent intervals during the past 40 years. Today, the interest aroused by the 1959 Seventh Educational Graphic Arts Exposition in New York has brought so many new proposals and requests for exhibitions of printing equipment that a review of the controlling conditions may be helpful. We need to understand that such exhibitions, valuable as they are, involve costs and complications that have become serious economic factors.

An editorial in a recent issue of a trade paper reviews these problems and concludes: "Why not develop an independent organization of manufacturers to plan a feasible program for these expositions?" That query, posed in good faith by a present-day editor, shows clearly how the rapid cycle of "generations" among industry leaders (and writers) may overlook past experience. *We do have an organization* of the printing industry and its manufacturers, formed over 30 years ago for just that purpose. That organization and its efficient manager, A. E. Giegenack, staged the big exposition in New York last September which was visited by thousands of graphic arts executives and technicians.

Incorporated in 1924 as National Graphic Arts Expositions, Inc., this cooperative activity in the graphic arts industry was founded by leaders of the International Association of Printing House Craftsmen, the New York Employing Printers Association, the United Typothetae of America (forefathers of today's Printing Industry of America), and a group of manufacturers who later be-

Too Many

came members of the National Printing Equipment Association (founded in 1933). Subsequent changes, from time to time, among the 18 directors of the Graphic Arts Expositions Corp. included addition of leaders of International Association of Electrotypers and Stereotypers, the International Printers Supply Salesmen's Guild, the International Typographic Composition Association, the Education Council of the Graphic Arts Industry, and the successors to those founder organizations which became Printing Industry of America and the National Printing Equipment Association.

This substantial and representative exposition organization has put on four highly successful national exhibitions. By contrast with the financial headaches that marked earlier projects (in 1924 and prior years), this cooperative exposition corporation has been well managed. From the start it has produced, with each show, substantial net proceeds that have been (a) allotted to educational uses and (b) retained in the necessary operating fund to finance the subsequent show.

The previous history of inadequate planning and backing of printing equipment exhibitions had included one elaborate project in 1924 in which the exhibitors made installations only to be faced with a court action to prevent opening the show unless the promoter fulfilled his obligations. In that case the exhibitors jointly contributed several thousand dollars to protect their investment — and it was that deficit crisis that led to the formation of the expositions corporation.

But it was recognized that the 1924 debacle was partly due to the efforts of show promoters to stage these exhibitions too frequently. The manufacturers could not consistently support so many projects—not only were heavy costs involved for space and the shipping and erection of heavy machines, and for the allotment of personnel which disrupted normal field contacts and service for printing plants across the country. But the changes and developments in graphic arts equipment do not occur with the annual frequencies that have marked the automobile industry, for example. The relatively modest size of the printing equipment industry, as compared with other fields, imposes economic limitations that deny the heavy outlays for frequent shows. Thus the expo-

Exhibitions?

sitions corporation has staged, at necessarily irregular intervals instead of the five-year period originally planned:

The Fourth Graphic Arts Exposition in New York —1927.

The Fifth (postponed by the depression and keyed to the New York World's Fair) in 1939.

The Sixth (postponed by the wartime period) in Chicago, 1950.

The Seventh, now fresh in our memories, in New York, 1959.

Meantime, and especially in the recent post-war years, the American manufacturers who seek foreign markets (thus building up their possibilities for broader service to printing plants at home) have variously exhibited in European expositions, generally through the agents serving the country in which the exposition is held. They have observed and commented on a fundamental difference in sales and service operations in Europe as compared with America. Overseas printers seem content to operate with considerably less "field sales and service coverage" than our American plants have grown to expect.

The overseas custom seems to feature trade fairs (and this applies to many lines of industrial products) where buyers make contacts that, in this country, have become an established routine of field calls in every city and town. An occasional printer inquires why the frequent trade fair policy can't be followed in America . . . but he also agrees that sales and service calls at his home plant and available from the manufacturers' district offices are much more satisfactory in meeting his own immediate needs.

And the manufacturer says: "Both methods of customer contact have their merits, but we can't attempt to operate *both* methods simultaneously. The resulting costs to us must inevitably become part of your costs for new equipment. So we consistently resist the many efforts today to organize equipment exhibitions. We believe that the expositions corporation has done an excellent job as a cooperative service to the several national associations of the graphic arts industry, including both the users and the manufacturers of equipment and materials. It has aided the Craftsmen and the Education Council

with substantial contributions after saving an operating fund for the next show—and we have found that intervals of several years between shows best fit our economic restrictions."★

NAPL'S VIEW:

'Will Exhibitor Profit?'

SO FAR as the NAPL is concerned, when we offer exhibit space we suggest that "space is to be purchased only if the buyer believes he will reap dividends over and above the cost of exhibiting." Exhibitors normally budget costs against anticipated returns, giving considerable weight to previous experience in exhibiting with the same association.

It is our conviction that, with a good relationship through the year between those who sell and those who buy equipment, supplies and materials; when they come together to sell and buy in what we call "Our Friendship Village Convention and Exhibit," that a national exhibit, reasonable in cost, will build business and good-will for everyone on both sides of the exchange.

In our free economy each manufacturer or dealer should determine, on the basis of anticipated yield, whether or not he will exhibit at a particular convention.

—WALTER E. SODERSTROM, *Executive Vice President,*
National Association of Photo-Lithographers.

PIA'S OPINION:

Why Have a Show?

PRINTING Industry of America has worked actively to develop and maintain a cooperative liaison with supply industry representatives. When an equipment show was held in St. Louis in 1952 and in Washington in 1953 to satisfy the demand of PIA members, representatives of the equipment industry suggested that PIA endeavor to satisfy this need in some other manner. Accordingly, in a continuing effort to cooperate fully with the supply industry representatives and at the same time endeavoring to satisfy membership needs, a series of annual PIA information shows were conducted. These shows proved not to be satisfactory to either the PIA members or to the supply industry representatives who cooperated by participating in the shows.

There has been a continuing demand on the part of PIA members to have available to them in one place annually a central source of information on new developments in equipment, supplies and industry services. Likewise, particularly for the smaller companies, there has been a demand to provide a market place or a meeting place where their investigations preliminary to the purchase of equipment and supplies might be conducted through conversations and discussions with supply industry representatives assembled under one roof.

PIA's decision, announced this year, to have the Printing Industry Educational Exhibits Corporation hold an annual equipment show in conjunction with PIA's annual

(Continued on Page 102)



Albert Fall (left), sales manager for Johnston, and salesman Philip Hart study individual sales forecast (Form A) prepared by Mr. Hart. At right,

Harry Gardner (standing), assistant general manager, evaluates composite forecast (Form B) with Mr. Fall.

better SALES *through better* MANAGEMENT

By *Harry T. Gardner*
Wm. G. Johnston Company
Pittsburgh, Pa.

MANAGEMENT in the printing and lithographing industry today, must modernize itself just as it modernizes its physical plant. Modernizing the plant simply means purchasing the equipment that study and research proves necessary. Developing modern management, however, is a do-it yourself proposition—it can't be bought. In nearly all cases, we must educate and train ourselves. We must gain knowledge so that we may train better—therefore manage better and in the process develop better management.

There is no question that sales and the management of sales, is one of the most important functions in our business. Therefore, the more we know concerning sales and sales management, the greater the possibilities of improving both our total business and our profits.

From an address delivered before a PIA Conference, March 23-25, 1960 at Chicago.

Where do we start in developing a hard-hitting, technically-informed, profit-minded sales force? Lets look first at the sales manager—in the printing business this job is something unique. For one thing, in few other industries is *sales* management more closely identified with and a part of general management. In many printing companies the sales manager and the general manager are one and the same person.

In most manufacturing businesses, the plant makes a product and the sales organization goes out to find customers for the product. Sales management, therefore, consists chiefly of building and directing a sales organization to move goods already manufactured, or scheduled to be manufactured according to predetermined specifications.

This is not true of sales management in the printing industry. Printing is a *service* or *custom* manufac-

turing business. The customer enters the picture *before* the product is manufactured, not *after*. For that reason the salesman must work closely with the customer and the production department right from the start of the job. Successful sales management in the printing industry is a matter of team work; customer, sales department, production department.

The printing salesman must be technically informed. Our policy is to give every new salesman an "Orientation Course." The length of this course depends on his previous experience—it may last several weeks; it can last several months.

Training Course

We start him in the mechanical departments as an "observer" to see what actually happens when words are put into type and ink on paper. He sees how lithographic plates are

made and gains some knowledge of the finishing operations in the bindery. We have him visit the photoengraving and electrotyping plants to get a complete picture of graphic arts mechanical operations.

When he has acquired a good visual picture of printing in general and our printing operation in particular, we introduce him to estimating, production planning and cost finding procedures. We make him an "assistant" to the production manager, then to the estimator and then to the planning and analysis department managers.

There is no intention, of course, to make an estimator, production manager or craftsman of him. But after several months of our "in-plant" operations he has a good basic knowledge of printing. *And more important*, he knows how our plant operates, what its capacities and operations are. He is familiar with all the steps in a job after the order is entered by the sales department up to and including the way his job is delivered.

In addition to this, our new salesmen now can understand what is going on at sales and production conferences. He knows the relationship of sales quotas to costs and plant capacity. The sales department, individually and collectively, must understand the need for selling the *whole* plant. This background, we have found, imparts that understanding.

Our salesmen participate in our over-all program to a far greater extent than is usual in most printing companies. They are not merely told what their quotas are. They have a part in planning them, and for that reason know *how* and *why* they have been established.

We use forecasted sales income as the first step of all planning. This is quite different from starting with capacity of the plant.

The sales forecast is the road map of the modern manager—it tells him where he is going business-wise in the coming year, and how he can best get there. The forecast tells him what his sales volume will be—both by process and by account. It is

from this information that he is able to establish his forecast for manning, equipment needed and to set selling costs. He can even forecast profit.

Sales forecasting must be handled with all the care and intelligence management can give to it. The accuracy of this forecast of sales volume can determine whether the company will be managed into the high profit group or *mismanaged* into the low profit group. Our industry has both: quoting Peter Becker, "Thirty-nine of every 50 firms fall into the latter or low profit group."

Forecasting Sales

Where do we start on forecasting sales? At our company we start with the individual salesman and with the historical records of his accounts. There is an 80/20 rule which shows that 80 percent of our total volume comes from 20 percent of our accounts. This rule holds remarkably true for all printers and lithographers. Your ratio may be 70/30 or somewhere in between and there are exceptions to all rules. This 80 per-

cent of your business comes from 20 percent of your *accounts*, not from the customers you sell a small job to once or twice a year.

If you find that the 80/20 rule applies to your company, as it probably does, your forecasting of sales volume will be simplified. In fact, it will simplify your whole management approach to sales. For by using this principle of proportion you will find that you are primarily concerned with only those 20 percent of your accounts from whom you are deriving 80 percent of your sales volume. These accounts are the backbone of your business. In my company, we throw into a miscellaneous listing, on our forecast sheet, any customer we don't expect to sell a sizable volume of business.

To prepare the forecast, each salesman lists on his forecast sheet all of his major accounts. In the next division headed "Sales for Last Year" he enters the actual sales for the previous year for each account under the sub-headings, "Letterpress, Offset and Total Sales."

In the next division, headed "Quota Present Year," he lists his present

Mr. Gardner begins plans for 1960 PIA Self-Advertising Competition by looking over samples of last year's prize winning presentation. Company earned top PIA award for large volume printers last year.



year's quota, by account, by process and total sales. In the fourth division, he enters his actual sales for the present year just ending, once again by process and by total for each account. In the last division, under the heading "Proposed Quota Next Year" he lists his forecasted sales by account and by process for the coming year.

Help from Buyers

But we don't let the salesman merely look at what he sold last year and guess at what he is going to sell next year. This must have all the research possible. Our salesmen start in October when most printing buyers are setting up budgets for the coming year. They talk with each buyer, thanking him for the business of the previous year, and discussing his expected purchases for the coming year. Remember this is on an account level. The salesman has the buyer's confidence, and the buyers know that if the printer's forecast is accurate the printer can then equip and man for the maximum service to the account. The accuracy of the information disclosed in this discussion is to the buyer's benefit.

Some buyers give only a close indication. Others open up and tell us the dollar amount of their total printing budgets and the percentage or even, in some cases, a list of the major jobs the salesman may expect in the coming year. Only after this research does the salesman complete his forecast. He then reviews this forecast with the sales manager, giv-

ing reasons for increases or decreases by accounts. The reasons for any increase or decrease in sales are listed on the back of the forecast sheet.

The sales manager evaluates the forecasts of all salesmen, and prepares a forecast covering the sales of the company as a whole. This the sales manager reviews with top management step by step. Top management evaluates the forecast in line with knowledge of business conditions in general and in our area in particular, keeping in mind any increases in costs that might occur in the coming year.

There may be a new labor contract to be negotiated in one or more of the departments, or an increased cost in paper or other materials that will affect manufacturing costs, thus affecting selling costs. Alert management usually can predict, with some degree of accuracy, the amount of these increases; and management must recognize these increases in the predicted or forecasted sales, just as they must include increased costs in their selling prices.

The sales forecast, prepared by the salesmen under the guidance of the sales manager and approved by top management, divided by 12 becomes the monthly quota; and by 52 of course, the weekly quota. Now management and salesmen all know where they stand and what is expected of them. Salesmen receive a record of weekly bookings and monthly billings. The monthly billing sheet shows jobs billed in total dol-

lar amount by accounts and by process, and the dollar markup. This is the salesman's needle to sell harder on the accounts where he is dropping behind on quota or on markups. This is also the sales manager's guide to apply the needle when necessary.

Forecast Is Accurate

How accurate can forecasting be? Our sales forecasts are generally in the area of 5 percent to 7 percent of actual sales. Once in the past 10 years we missed by more. That was last year when the steel strike was instrumental in causing us to miss our forecast to actual sales by 11 percent. Some 11 or 12 years ago we found ourselves over-optimistic, and at the end of the first quarter we re-worked the budgets to a more realistic figure.

These are the exceptions, however, and *should not* happen often. But don't hesitate to make adjustments at the end of a quarter or at mid-year, if necessary.

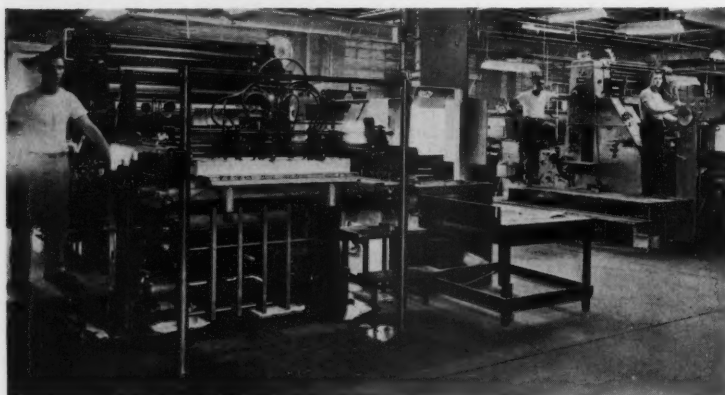
As I have mentioned, last year we over estimated our sales forecast to actual sales by 11 percent. Yet our forecast on profits for 1959 was 6 percent after taxes while our actual profit *after taxes* was 5.45 percent or approximately 11.2 percent before taxes.

Why is our company one of the select few of the printing companies earning more than 8 percent before taxes? It is primarily because of our forecasting of sales and profits, and our close control of the budgets developed from these forecasts.

At Wm. G. Johnston, management receives monthly tabulations of sales by salesman, broken down by account and by process, and showing the cost of each job, the selling price and the markups. We also receive this by salesman and account on the year-to-date. Each salesman receives this information on his own sales—both monthly and year-to-date. It shows all concerned graphically what is being done both on sales and on markups.

You will realize that the salesman or manager can, by comparing these monthly and year-to-date records with the forecast, know not only

View of a portion of the extensive lithographic pressroom facilities at Johnston company. Firm is 142 years old, one of the oldest in the country.



A PROPOSED SALES QUOTA

1960
(YEAR)J. Pierpont Picaepper
SALESMAN

WILLIAM G. JOHNSTON CO.

CUSTOMER	SALES 1958 (LAST YEAR)			QUOTA 1959 (PRESENT YEAR)			SALES 1959 (PRESENT YEAR)			PROPOSED QUOTA 1960 (NEXT YEAR)		
	Letterpress	Offset	TOTAL	Letterpress	Offset	TOTAL	Letterpress	Offset	TOTAL	Letterpress	Offset	TOTAL
Castro's Little Quiver Gils	1,991.	30,505.	32,496.	3,500.	36,000.	39,500.	3,698.	34,743.	38,441.	3,500.	41,000.	44,500.
Jain Mannsfield Packing Corp.	3,009.	18,695.	21,704.	2,500.	22,900.	25,400.	2,353.	26,024.	28,377.	2,500.	25,000.	27,500.
Parr, Hoof & Mouth Remedies	1,498.	9,315.	10,813.	2,200.	8,300.	10,500.	1,947.	9,561.	11,508.	2,100.	11,500.	13,600.
E. Presely Rubber Rolls, Inc.	800.	4,525.	5,325.	900.	7,800.	8,700.	1,025.	3,275.	4,300.	--	--	--*
Moon-Shoot Finance Co.	5,996.	7,019.	13,015.	8,600.	9,600.	18,200.	8,994.	11,752.	20,746.	9,700.	15,000.	24,700.
Bourbon Dry Wall Products, Inc.	7,010.	11,485.	18,495.	7,800.	10,600.	18,400.	8,224.	11,978.	20,202.	7,500.	14,500.	22,000.
Cancan Can Co.	1,204.	3,783.	4,987.	1,400.	6,200.	7,600.	1,325.	6,536.	7,861.	1,500.	7,500.	9,000.
M.M.M.M.M. Monroe	2,201.	14,993.	17,194.	1,600.	19,500.	21,100.	2,216.	21,717.	23,933.	3,000.	25,000.	28,000.
Honest Carr, Used Johns, Inc.	4,094.	28,011.	32,105.	5,300.	33,500.	38,800.	5,018.	36,114.	41,132.	5,700.	41,500.	47,200.
Minute Maid Wash	1,913.	11,501.	13,414.	--	--	**	--	--	**	--	--	**
Miscellaneous	1,479.	9,165.	10,644.	2,100.	9,700.	11,800.	2,177.	9,123.	11,300.	3,000.	10,500.	13,500.
TOTALS	31,195.	148,997.	180,192.	35,900.	164,100.	200,000.	36,977.	170,823.	207,800.	38,500.	191,500.	230,000.

* Assigned to new salesman
** Out of business

Sales Manager
APPROVED

38,500. 191,500. 230,000.
Monthly Quota \$19,167.

B PROPOSED SALES QUOTA

1960
(YEAR)Total All Salesmen
SALESMAN

WILLIAM G. JOHNSTON CO.

CUSTOMER Salesman	SALES 1958 (LAST YEAR)			QUOTA 1959 (PRESENT YEAR)			SALES 1959 (PRESENT YEAR)			PROPOSED QUOTA 1960 (NEXT YEAR)		
	Letterpress	Offset	TOTAL	Letterpress	Offset	TOTAL	Letterpress	Offset	TOTAL	Letterpress	Offset	TOTAL
J. Pierpont Picaepper	31,195.	148,997.	180,192.	35,900.	164,100.	200,000.	36,977.	170,823.	207,800.	38,500.	191,500.	230,000.
Herman Hotshot	30,795.	295,100.	325,895.	40,500.	305,000.	345,500.	47,515.	297,654.	345,169.	49,500.	312,000.	361,500.
John Highpressure	62,850.	204,772.	267,622.	48,500.	224,000.	272,500.	55,103.	237,515.	292,618.	60,800.	237,200.	298,000.
House	10,028.	63,513.	73,541.	12,000.	65,000.	77,000.	13,100.	66,078.	79,178.	15,000.	70,000.	85,000.
TOTALS	134,868.	712,382.	847,250.	136,900.	758,100.	895,000.	152,695.	772,070.	924,765.	63,800.	310,700.	374,500.

General Manager
APPROVED

63,800. 310,700. 374,500.
Monthly Quota 81,208.

C February 1960 Salesman J. Pierpont Picaepper

Job Order No.	Customers Name and Job Description	Net Sales	Job Cost	Markup
238	Castro's Little Quiver Gils 18,475 Quarterly Reports	545.00	475.00	70.00
241	27,153 House Organs	2,509.00	2,250.00	259.00
	<u>Can Can Can Company</u>			
273	10,000 Mailers #1832	685.00	624.00	61.00
286	32,000 Mailers #367	6,131.00	5,476.00	655.00
	TOTAL LETTERPRESS	9,870.00	8,825.00	1,045.00
	<u>E. Presely Rubber Rolls, Incorporated</u>			
123	20,000 Catalogs	4,325.00	3,476.00	849.00
128	10,000 Letterheads	245.00	198.00	47.00

	Net Sales	Job Cost	Markup
<u>Jain Mannsfield Packing Corporation</u>			
7,500 Bulletin #5595	275.00	235.00	20.00
1,500 Invoice Forms	65.00	58.00	7.00
<u>Moon-Shoot Finance Corporation</u>			
2,400 Mailers	4,200.00	3,540.00	660.00
TOTAL OFFSET	9,110.00	7,547.00	1,563.00
Letterpress	9,870.00	8,825.00	
Offset	9,110.00	7,547.00	
TOTAL	18,980.00	16,372.00	
Less Cost		16,372.00	
Markup		2,608.00	
Markup %		15.7%	

where he has been but where he has yet to go in sales and markup, account and by process. They also point out whether the salesman has been wasting time on unprofitable accounts.

We use I.B.M. machine accounting. Therefore, the information on sales by salesman, by account, markup, and by process is easily obtainable. But if you follow Peter Becker, Jr.'s methods as outlined in the PIA publication, *Managing Your Business*, you will find systems whereby this information can be developed just as accurately. As you become aware of the value of this information, you will question how you have been able to manage sales without this knowledge.

This system permits management to plan for a profit-making organization geared to producing the amount of sales needed at a cost that will bring into the company a fair profit.

The sales, factory, and administration budgets that are developed from forecasted sales income become the map that management follows to keep the company on course.

Self-Advertising

There are other aids management should use in the development of sales. One of the more important of these is *advertising*. It is astounding that printers who, for the most part, owe their business to advertising do so little of it themselves.

How can a printing salesman suggest to a steel fabricator that he should have a direct mail campaign

if the printing firm he represents doesn't believe in direct mail advertising for its own business?

We have in the files at my company samples of advertising dating back to the early 1800's. It is my opinion that if there is one thing a company today can *not* afford to do without—it is advertising. Advertising is not only for the large printers. Those of you who have seen the PIA-Miller Printers & Lithographers Self-Advertising Exhibits know that many of the top entries are from companies employing fewer than 20 persons. I point this out to assure you that size of company has nothing to do with a successful advertising campaign; and, in my opinion, neither does the dollar amount.

The campaign of the Wm. G. Johnston Company cost just a little more than 1/2 of 1 percent of annual sales—yet our campaigns have been very successful, not only in winning awards, but in increasing present business and in developing new business.

It must be remembered that the advertising program is the door opener for the salesmen—it is that which softens up the prospect for the salesmen's closing. And in these days when the cost per sales call runs from \$8 to \$10 per call and *up*, it is important that your sales story be told regularly to both account and prospect. Advertising does it for pennies per call. Remember it is continuity that counts. To coin a phrase: "It is the steady rain that soaks." Don't blow your whole advertising pro-

gram on one or two elaborate pieces—but develop a continuity whereby your message will be reaching your accounts and prospects with regularity.

Don't plan or mail your advertising pieces as single, isolated units. Prepare four or six at one time and produce them all at one time. This is not only more economical but it assures a continuity in your program. If you've printed them, you'll mail them.

Your advertising should be an extension of your personal selling. Your advertising program should be based on those sales points your sales department finds most effective in their personal contacts. It should point up the services and facilities that are best identified with your company.

You can't afford to do an amateurish job on your own advertising. Make it professional—in ideas presented, in the message it conveys, and in format and design. Remember your advertising reflects the capabilities of your company.

Give your sales department all the sales tools possible—cut down the cost per call, make your name known. Our product is a visual one. Give your salesmen presentation books so that they may show visually those they are calling upon what you have done for others.

If in your sales presentations you claim to have certain advantages and skills that benefit the printing buyer, prove this claim by laying before him samples of work produced for others, done up handsomely in a leather ring binder or similar presentation book. Here the buyer can see the originality of your layouts, the quality of your art work, and the skill of your typography. Include a list of your prestige accounts so that he knows the type of printer he is dealing with. This is selling by eye as well as by ear.

One final thought to further point up the importance of sales management in the printing industry: "The sales department is not the whole company—but the whole company has to be the sales department." ★



Harry Gardner began his career in the graphic arts industry in 1937 as assistant production manager at W. S. Walker Advertising, Inc., Pittsburgh. After five years in this position he entered the armed forces. Upon release from the service he joined the sales staff of the Security Banknote Co. In June 1950, he joined the William G. Johnston Co. as a sales executive. He was elected Secretary of the company in February, 1957, and in April of the same year, was appointed assistant general manager. He was elected a director in February 1958.

Despite the research that has been done, lithography still has some limitations that can restrict its future growth. These are (1) the variability of the ink-water balance, (2) the need for special characteristics in paper, (3) the use of tacky inks, (4) the possibility of slur in the impression when printing on smooth surfaces, and (5) the overall content of the blanket with the paper in the impression nip. In addition it suffers from the use of poor pigments, the fact that papers are not white and the graying of halftone tints. Developments in photography, platemaking, press, and paper and ink are helping to eliminate these limitations. Balanced inks, better plates, the Dahlgren and other dampening systems, a new disposable blanket, ink transfer and tinting studies, and work on the development of a print quality instrument may eventually lead to automation of quality on the press. (From a paper presented at the recent TAGA meeting.)

Five Lithographic Hurdles— And How We Must Clear Them

By *Michael H. Bruno*
Lithographic Technical Foundation
Research Director

OF ALL the graphic arts processes, lithography has been the most progressive with the greatest growth and largest number of improvements and developments over the past 40 years. It is more than just coincidence that it is the only process that has had an organized cooperative research and educational program over a long enough period of time to develop a sound balance between basic and applied research. This program continues to produce new improvements and developments at a steady pace. These, coupled with the developments of manufacturers and suppliers, help keep lithography dynamic and lithographers awake and progressive.

Despite all these developments, though, there are still some basic problems or weaknesses in the process that need to be solved or corrected. This paper describes the limitations that still remain in the process and how they are being worked on.

At the present time we are aware of five limitations that are related to the offset lithographic principles and three others that affect other processes as well.

The offset lithographic limitations are:



1. Ink-Water Balance

1. Ink-Water Balance: The need for printing with both ink and water requires accurate control of the ink-water balance on the press. While the difficulty of achieving it

varies with a number of factors, once it has been established, it can be maintained within reasonable limits as long as the press is running. As soon as the press is stopped, however, the balance is upset, and it takes some time to reestablish it after the press is started. This results in one or a combination of difficulties which include variation in colors, lost production, and the use of waste sheets on sheet-fed presses or paper waste on web presses. The less water that is needed to maintain the difference between the image and non-image areas of the plate, the easier it seems to be to establish an ink-water balance and hold it in printing. Any development, therefore, in the direction of printing with less water will help to eliminate this limitation.



2. Paper

2. Special Paper: The use of water in the printing process requires the use of papers that cannot have (1) any injurious chemicals that can be leached from them and (2) coatings that are excessively water sensitive. The troubles that can result when this rule is ignored are well known, such as tinting, scumming, moisture picking, and piling. Again, any developments that permit the use of less water in printing reduce the importance of these demands for special characteristics in litho papers and may allow the use of letterpress papers or the development of cheaper papers for lithography.



3. Ink

3. *Thin Films of Tacky Inks:* Offset inks are fairly tacky. In addition, the high speeds of offset presses and the double split of the ink film from the plate to the blanket and the blanket to the paper develop even higher separation forces. These, then, require a fairly strong paper to avoid picking, blistering, or splitting. Any development in the direction of softer inks would eliminate these problems and allow the use of weaker papers, which could further reduce the cost of paper.



4. Slur

4. *Slur:* Slurred printing is caused by the blanket sliding in the impression when printing on smooth papers, coated board, metal, plastics and other relatively smooth surfaces. This is especially true if improper or excessive packing is used between the blanket and the paper. It may be caused by the fact that rubber is not truly compressible when it is under tension as it is when used as a blanket on the press. Any development to eliminate the sliding of the blanket in the impression would allow the use of higher pressures in printing. These could then result in better conformability of blankets to the printing surface and could compensate better than they do now for the usual variations in caliper of materials like board, metal and plastics.



5. Blanket-Paper Contact

5. *Overall Contact of Blanket With Paper:* A serious limitation of the lithographic process is the overall contact of the blanket with the paper in the impression nip. Because of this, the paper must be perfectly flat or it will distort in the impression, causing doubling of the image elements, wrinkles, and/or misregister due to images "fanning out" on wavy edged paper, and "fanning in" on tight edged paper. Any developments that would eliminate or alleviate this condition could result in better consistency in printing, improved quality of reproduction, and savings in waste, especially on multi-color presses.

The three limitations that apply to other processes as well as lithography are:

1. *Improper Hues of Pigments:* The pigments that are available for color reproduction, especially magenta and cyan are far from ideal in hue and somewhat unsatisfactory in light-fastness. This applies to all three major printing processes. Any improvements in the hues and purity of pigments will result in a wider gamut of colors, cleaner in between colors, and simpler color correction in masking, either by photography or electronic scanning.

2. *Paper Whiteness:* The brighter and more neutral the reflectance of light from the paper, the wider will be the gamut of colors that can be produced on it. The use of fluorescent brighteners is not the answer to this problem unless neutral brighteners can be found. All of the brighteners used at present have a blue fluorescence which accentuates the blues but degrades the yellows in the reproduction.

3. *Graying of Halftone Tints:* When a halftone tint of a color is printed on white paper the result is grayer than it would be if the ink had been reduced with white ink and printed as a solid. The white paper surrounding the dots of the halftone tint add gray to the color instead of white. This defect is characteristic of the halftone process and applies to letterpress and, to some extent, to variable area gravure processes, like Dultgen and Henderson, as well as lithography. If more of the area of the paper in the tints is covered with ink as in the collotype and conventional gravure processes the colors of the tints are purer, and cleaner reproductions can be produced with pigments of lower purity and cost.

Many of the developments and much of the research in lithography have a direct effect on the limitations of the process. Most of these resulted from a desire to improve quality; increase consistently and/or reduce costs, but they have also helped to keep the limitations of the process in check and reduce their importance.

Color Reproduction and Photography

The most important thing that has happened in color reproduction in the past five years has been the color survey started by LTF in 1956.¹ This survey indicated the direction in which help was needed. It showed that a great deal of confusion existed concerning the requirements for good color reproduction. The industry as a whole, with a few exceptions, was making little effort to select and use pigments that could be corrected properly by masking; and little was being done to control the hues of overprinted colors. As part of this survey, LTF developed a system of evaluating process color inks using the LTF Color Circle.² Two new systems of plotting process inks were reported by Frank Preucil at a TAGA meeting.³

A direct result of the survey was the development of the concept of "balanced inks," the use of which has (1) helped eliminate considerable confusion concerning the requirements for good color reproduction, (2) simplified color correction, and (3) improved color reproduction in general.

Other important developments in color reproduction and photography include a new method by LTF for making a mask for the black printer in four-color process inks; a new integral mask technique called Multimask by Gevaert; the use of light sources other than arcs for photography; and the increased use of polyester film bases.

The new LTF mask for the black printer uses a combination of the Wratten Nos. 22 and 61 filters in place

of the combination of Nos. 22 and 44A filters reported previously.⁴ The desirable feature of this mask is that it records all colors except yellow as black so that it removes black from all colors.

The Gevaert Multimask method⁵ makes use of an integral tripack with dye sensitized, dye coupled emulsions. This combination is claimed to provide automatic color corrections for all four separations made from either transparencies or opaque copies.

A significant trend in photography appears to be the use of illumination sources other than arc lights. Over-voltage tungsten lamps, such as Colortran, have been in successful use in many plants for several years. A more recent development in illumination is the pulsed Xenon lamps, like Ascorlux. These have a color temperature similar to arcs and have slightly higher speed. Some work has been done on single or repeated flash equipment for photographic illumination.

Dimensionally stable bases have been used in photography since World War II. Vinyl base was the first to be used, followed by polystyrene, which has been in fairly general use by all manufacturers of films except du Pont. Until last year, polyester base was used only by du Pont. During the past year, Kodak has also started to use polystyrene.

Other developments that are being worked on or field tested now are (1) an ortho litho type film with four times the speed and equal etching characteristics of present films (there should be little trouble now in making halftones from masked separations); (2) a lower contact, emulsion so that contact printing can be controlled; and (3) a new densitometer with pre-set zero for use with filters so that successive filter readings can be made on the same spot without moving the head to re-zero on the paper for each filter reading. Some work has been done on a screenless printing process using a presensitized plate, but conditions for use are much too critical for the process to be practical at present.

Platemaking

By far, the most important developments in lithography of the past 20 years have been in platemaking. As recently as 10 years ago, the major problem in most lithographic plants was how to make a good plate. Today, with so many good plates available, the major problem is what plates should a plant use. The industry has virtually standardized on presensitized and wipe-on plates for the shorter runs, deep-etch and copperized aluminum for the longer runs, and bi-metal plates for special uses, like metal decorating, carton printing, and web-offset where abrasion can be a problem, and extremely long runs.

The developments in platemaking have resulted in wider differences between the ink receptivity of the image areas and the water receptivity of the non-image areas. These have made it possible to print the plates with much less water on the press. This reduction in the amount of water needed for printing, of course, has

resulted in many improvements in printing and simplification of the problem of establishing and maintaining an ink-water balance on the press.

Recent research in platemaking has been on the corrosion, deep-etching, and copper deposition on copperized aluminum plates and on the investigation of new alloys of zinc and ways of improving the use of zinc for lithography.

The corrosion of copperized aluminum plates was found to proceed rapidly at high temperatures and relative humidities if deep-etching solutions containing iron salts were used with no removal of the iron deposited on the image areas and if the copper image areas were not protected by lacquer and ink.⁶

The discovery that the iron deposited in deep-etching copperized aluminum plates could cause spotty blinding of plates on the press led to the development of the Nichol treatment to remove this iron prior to copperizing the plates.⁷ This treatment has been effective in many plants in eliminating plate blinding but some problems have been reported with its use. It would be desirable if this treatment did not have to be used. Two ways of eliminating the need for it would be (1) to use deep-etching solutions which did not contain iron salts, and (2) eliminate the deep-etching step completely. Both of these approaches have been used successfully except that in cases where the deep-etching step has been eliminated, the Nichol treatment has been substituted for it. Tests are being made now to determine whether this is necessary. Two proprietary deep-etching solutions that do not contain iron salts have been found to work very well without Nichol and a number of other solutions are being developed.

In connection with copperized aluminum, an investigation is being made of the etching characteristics of different types of aluminum, especially foreign grades. All vary in the evenness of etching and deposition of copper. It appears now that specific etching solutions or special treatments may need to be developed for each of the different types of aluminum to promote even deposition and adhesion of copper on them.

With regard to zinc, two of the major disadvantages of its use in lithography are (1) creep during printing



Michael H. Bruno

on the press and (2) breakdown of desensitized areas on the plate during a press run. The zinc manufacturers have been able to eliminate creep on the press by the development of a new alloy of zinc, containing small amounts of titanium and copper. According to tests at the LTF laboratory, this new alloy shows about the same creep in printing as aluminum, which is considered negligible. Field tests are now being made with this new alloy.

Other research to improve the use of zinc in lithography includes efforts to (1) produce permanent water receptive surfaces on zinc by anodizing and/or chemical treatments and (2) develop means of presensitizing zinc plates. Progress is being made on both. Anodizing with alkaline bichromate solutions shows promise of producing coatings on zinc that remain water receptive for long periods of time. Success has been achieved in producing a fine grain on zinc, comparable to brush grained aluminum, which works satisfactorily in a wipe-on process developed for zinc. Work has also been done on the development of special hydrophilic rolling lubricants for use in the rolling operation at the zinc mill. These lubricants produce zinc sheets with a high luster. Their usefulness in lithography has not yet been evaluated.

Press

Three of the limitations of the offset lithographic process involve the press. These are (1) ink-water balance, (2) slur caused by sliding of the blanket in the impression, and (3) overall contact of the blanket with the paper in the impression nip. Work on the development of new dampening systems and new blankets will help with the first two limitations. As far as we know, no work is being done on the third.

Dampening: With the newer plates and the need for less water, control of dampening on the press has become quite critical. The conventional system using cloth covered rollers leaves a lot to be desired. Many other types of dampening systems have been tried, such as sprays, condensation, etc.,⁸ but none of these has been successful in replacing the conventional system.

The first successful departure from the conventional dampening system came about five years ago with the substitution of parchment paper for the molleton covers on the plate form rollers.^{9,10} These paper dampeners have been very successful in hundreds of plants in achieving a better control over dampening than is possible with the conventional dampening system. Even with this system, though, the ink-water balance is critical to adjust and difficult to maintain.

Other methods for dampening that have been tried include the Mullen or Effusor System.¹¹ In this method, a large amount of solution is applied to the plate. The excess solution is blown off by an air blade, and is drawn off by vacuum. One of the main advantages claimed for it is that dampening is accomplished with so little water that (1) the ink-water balance is re-established very quickly after a press stop (usually in a matter of two to three sheets) and (2) letterpress papers can be printed.

The major disadvantages of the system are cost, maintenance, and power requirements.

A promising new approach to the dampening problem is the Dahlgren Dampening System.¹² In this method, the dampening solution consists of about one-fourth alcohol and three-fourths water and is fed directly onto the first ink form roller. This roller does the dampening as well as some of the inking. The advantages claimed for it are (1) ability to dampen with less water; (2) ability to use softer inks; (3) ability to re-establish the ink-water balance quickly on the press; and (4) ease of operating the press by eliminating the need for critical adjustments in the dampening unit.

This system is being tried in a number of plants. It is rather expensive but if the advantages claimed for it are valid, they could result in considerable cost savings by (1) making it possible to use letterpress grades of paper; (2) reducing the number of waste sheets after each stop on the press; and (3) increasing production by eliminating critical adjustments in the dampening system and relieving the pressman of his anxiety over the ink-water balance.

Blankets: As already pointed out, the use of rubber blankets can result in slurred printing when excessive packing is used, due to the fact that rubber is not truly compressible when under tension and slides in the impression, especially when printing on smooth surfaces.

A new disposable blanket has been developed by Dewey and Almy Chemical Company which shows promise of eliminating this problem.¹³ This new blanket consists of two parts: (1) a rubber impregnated fabric carcass similar to the ordinary blanket; and (2) a compressible fibrous top member coated with a rubber composition on the surface. Each part is about 0.032" thick, or half the thickness of an ordinary blanket. The top member is coated with a pressure sensitive adhesive on the back so it can be attached to the carcass on the press. An interesting feature of the method of application is that the top member is not under tension. When damaged, it can be readily removed and a new top surface attached to the carcass.

The disposable feature of this blanket is certainly a valuable one, especially from the standpoint of cost of replacement. But it is not the most important feature of this blanket. The fibrous top member of this blanket is claimed to be more compressible than rubber without increasing pressure unduly. This would indicate that better conformability to rough surfaces should be possible with this blanket because greater squeeze between blanket and paper should not result in much higher pressure. This compressibility feature of the new blanket may also eliminate slippage or sliding in the impression.

Paper and Ink

The improvements made in other phases of the process, particularly the better plates requiring less water on the press and the new dampening systems allowing the use of softer inks, indicate that the demands for high pick strength and water resistance in litho papers can be

relaxed somewhat.¹⁴ Just how much is hard to tell without more knowledge of the mechanism of ink transfer and the relationship between ink, paper and dampening solution at the instant of printing. Research is now going on in both these areas to gain this information.

Ink Transfer: A number of research organizations, besides LTF, are studying the mechanics of ink transfer.¹⁵ In LTF's research we are measuring the forces involved in ink transfer on an LTF Pick Tester, modified with a special transducer consisting of a strain gauge equipped anvil and suitable electronic equipment including an oscilloscope. A study of the ink transfer characteristics of blankets has been made.¹⁶ At present we are studying ink transfer on uncoated papers. An important part of these studies has been the production of replicas of paper surfaces so that we could study the effects of paper roughness, porosity and absorption independently.

Tinting: The interrelationship between ink, paper and dampening solution has an effect on the problem of tinting. Tinting occurs when ink is emulsified in the dampening solution, probably at the interface of ink and the solution on the plate. A number of factors are involved. The type of plate, treatment of the blanket, composition of the dampening solution, ink, ingredients in the paper surface and conditions of printing are all important factors.

The problem is a very complex and elusive one which will be difficult to solve until we can find ways of producing tinting at will. We are convinced, though that once we know the answer, we will be well on our way to explaining the still little known mechanism of dampening on which so many other problems in lithography depend.

Perhaps the most important research that is going on in lithography now is the study of print quality, the factors that affect it, and how these factors can be measured and controlled. Color and quality control are serious problems in lithography. LTF has made an exhaustive study of the quality of halftone images and how it can be defined and measured objectively.¹⁷ The factors affecting quality are (1) interference patterns, like graininess, mottle, moire, etc.; (2) image definition, such as sharpness and resolution; and (3) tone and color reproduction. A recording densitometer has been built to measure these factors, but it is too slow an instrument to use in production. A print quality instrument is now being designed that will measure these factors at press speeds.

Summary

Along with the study of the measurement of the quality factors, a study is also being made of means to control each factor. Once the instrument for measuring these factors is available and means have been developed for controlling them, it should be possible to control the consistency of color and quality of a reproduction automatically on the press.

Despite the phenomenal growth of lithography and the great many improvements and developments introduced

in recent years, there are still a number of limitations in the process that can hinder its future growth if they are not corrected. Lithography recognizes that these problems exist and is doing something about solving them.

The research that is going on in color reproduction and photography is providing a better understanding of the requirements of good color reproduction and improving its quality. The newer plates and developments in dampening systems are making it possible to print with less water and softer inks, thus relaxing the demands for higher pick strength and water resistance in litho papers. New blankets may eliminate slur and have better conformability to printing surfaces without distorting the image elements. Work on ink transfer will define the requirements for optimum transfer of ink from one surface to another. Research on tinting will lead to a better understanding of the interrelationship between ink, paper, and fountain solution on the press, and how it can be controlled. Studies of print quality will result in greater consistency of quality and eventually automatic control of it during printing.

All this research will not solve all the problems of lithography and eliminate its limitations in the next few years. But with an organized program of research, as each problem is solved another block is added to the foundation of knowledge that will be needed eventually to solve all the problems of the industry.

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Lithographing on Plastic

AMS reports it turns out 3,500 impressions an hour on vinyl plastic with no drying problems

By Mike Geary
Washington Correspondent

ARMY Map Service has been printing on plastic for over 10 years and the decided difference between the AMS lithographed plastic sheet and the majority being turned out by commercial lithographers today, is the important feature that prompted ML to take a detailed look into the subject of AMS plastic inks.

Clifford P. Chapman, chief, Development and Test Division of the AMS Graphic Arts and Distribution Department, upon returning from a recent field trip, told ML, "Large plants that I have recently visited, that are engaged in lithographing plastic sheets, continue to use varnish, lacquer, or a combination of both, on their plastic sheet runs, and press speeds are slow. Here at AMS, we can turn out 3,500 quality impressions an hour on vinyl plastic and the inks dry more quickly than regular litho inks on paper map stock."

The primary product produced on plastic at AMS, is the plastic relief map. During World War II, these were distributed in small quantities to high echelon defense sources only. However, innovations in the production of plastic models have simplified methods to an extent that plastic relief maps were made available to front line troops during the Korean conflict.

The plastic stock used at AMS is opaque white vinyl, .015 in thickness and furnished in sheet sizes 25 x 37" and 49 x 73", trimmed out to 24 x 36", prior to printing.

During the initial experiments in the forming of printed plastic sheets, it became obvious that ordinary lithographic inks were unsuitable for plastic printing, because of heat, abrasion and extrusion of forming operations, which caused the printed image to crack and peel.

AMS requested several commercial ink manufacturers to submit samples of inks, compounded to match AMS standard color guides and capable of producing a fast drying, surface penetrating ink, for use on vinyl plastics. Such an ink was developed by Acheson Dispersed Pigments Company of Philadelphia. This product was put

into production and, with periodic modification, its use continues.

(Editor's Note: It is not usually the policy of AMS or ML to mention or endorse specific suppliers in trade articles. However when there is a sole source of supply for a particular product, as is the case with the plastic ink used at AMS, identifying the manufacturer is believed to be of service to the reader, by relieving him of the burden of making inquiry to ML or AMS to obtain the manufacturers' name; which is public information.)

Although the formula used in manufacturing this ink was not revealed, it is known that the ink is of vinyl base and contains plastic solvents and other ingredients which cause the ink to penetrate the plastic surface and dry rapidly.

An ink that met the molding requirements, however, necessitated complicated press operation in its use, its behavior being quite different from regular litho inks, which were previously found to be unsatisfactory for plastic printing.

Static Problems

The fast drying qualities of the vinyl base ink, the static electricity common to plastic sheeting and the additional static electricity caused by the many ink rollers milling the ink, seriously impaired press operation. The characteristics of the new ink and the excessive static electricity, caused both ink and water to pile up on the ends of the ink rollers, eventually resulting in insufficient flow of ink onto the plate, over-inking and additional pile-ups, sometimes requiring a shutdown and complete wash-up in the middle of a press run; with re-inking seldom making a sincere color match to that prior to the shutdown.

To alleviate press trouble, certain press modifications were required. The press modified and put into production on plastic, was a 42 x 58" Harris LSJ. The number of ink rollers was reduced and the ink fountain lowered

to allow shorter travel distance for the ink, from fountain to plate. The remaining form rollers, carrying ink to the plate and the water ductor roller, were cut from 60 to 40 inches. Cutting the rollers reduced static electricity and the resultant pile-up of ink and water.

Until recently, this modified press was used for all plastic production at AMS. However, this major modification is no longer required for successful lithography on plastic.

Lynn R. Wickland, chief, Graphic Arts and Distribution Department, told ML, "Since we have introduced the pre-treated aluminum, rub-on plate, into our plastic operation, we have all but eliminated our water problem and with constant striving for means to reduce excessive static electricity, there remain only certain mechanical adjustments for feeding the heavy material through the press, to enable us to obtain satisfactory results in printing on plastic with any of our presses."

Map Service ink researcher, William H. Cade, later told ML that the AMS field reproduction plant in San Antonio, is in full production on plastics with only minor press adjustments.

Mr. Wickland's reference to certain mechanical changes by no means was meant to imply that there is merely a simple make-ready from paper to plastic operation, but that with constant ink improvements, the use of pre-treated metal, with fine grained surface and minimum water requirements, major modifications, such as reducing the number or cutting rollers or lowering of the ink fountain, are no longer required.

Press Adjustments

However, certain unusual press adjustments must be made. The weight of the plastic sheets necessitates the increasing of the spring tension on the side guides. The

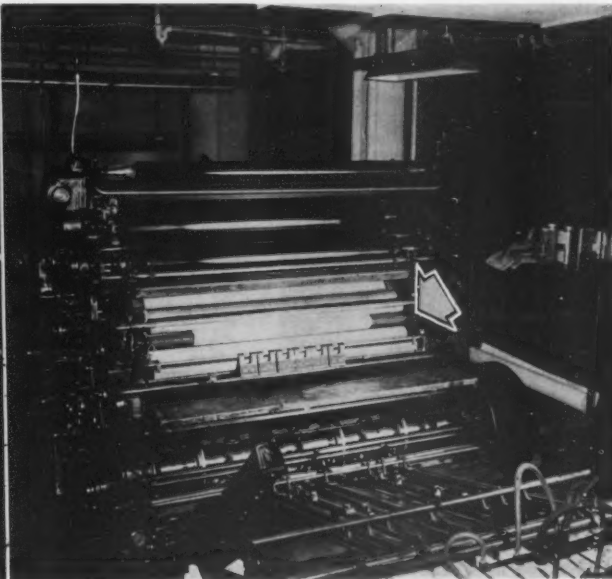
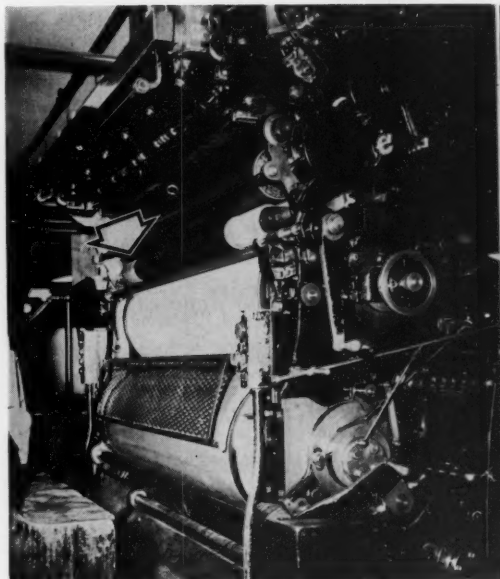
guide on the operator's side of the press is set to pull the sheet with the opposite guide being set to push the sheet toward the operator. The rigidity of the plastic sheets requires the elimination of four head-stops and the positioning of the other two stops about one-fourth of the sheet length from each edge of the sheet. The sheet leaders are moved to the side or removed altogether to prevent contact with the plastic and possible scratching, as the sheets move down the feed board. Four "duckfeet" are used, two positioned over the trips and two over the headstops. The spring tension on all grippers must be increased to pull the heavy stock. Maximum vacuum is used on the feeder. On the presses specifically designated for plastic reproduction, the steel rollers are copperized to prevent stripping of the ink from the rollers.

Originally, the solvents furnished by the ink manufacturer had an adverse effect on normal lithographic rollers and press blankets, causing excessive tackiness and swelling. However, with the use of improved solvents, synthetic rubber rollers and the continually improved press blankets available to the trade, these difficulties have been virtually eliminated.

As in any quality or specialized printing production, a heavy burden of responsibility falls upon the pressman. When handling plastic prior to stocking the feeder, he must carefully inspect for warped sheets, surface imperfections, plastic chips or any foreign material that would cause a jam or be picked up by the rollers. Extreme care must be exercised to avoid touching other than the extreme edges of the sheets, because oil, fingerprints or perspiration will prevent ink from adhering to the plastic. At AMS, 2,200 sheets have been found to be the maximum load for the feeder. When the pressman is encountering press difficulties, it is often advisable to

Rubber rollers on 60" press (left) are cut to 40" to minimize ink piling on ends of rollers. On full press sheet size, regular 60" rollers are

used. Form dampeners are cut down to 42" (right) when full sheet size is not used for an AMS litho job.



load only a few dozen sheets at a time. Due to the high cost of the plastic sheets, waste stock is re-used many times for make-ready.

Vinyl Base Ink

The vinyl base ink has been found to be approximately the correct consistency when used from the original container without modification; but if necessary, it may be modified by adding synthetic resins to obtain a specific consistency. A special thinner is used with the ink and this solution may also be used to reactivate dried ink on the rollers. The vinyl base inks do not skin or liver.

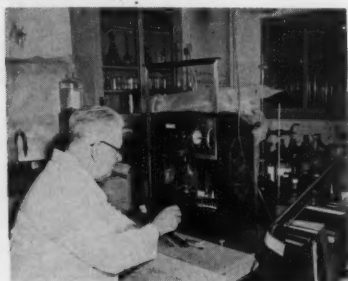
Running from darker to lighter colors permits clean wash-ups in minimum time. From an economy standpoint, AMS uses the sequence: black, blue, red, gray, yellow and green in printing plastic sheets. A double wash-up is used between the gray and yellow runs. A special wash-up solution is provided by the ink manufacturer and is used along with other commercial solvents for roller cleaning. Acetone is used to clean and neutralize the press blankets.

Although Army Map Service has been printing on plastic for the past 10 years, their researchers admit that not all of the problems of plastic printing have been completely solved. Development in this field by AMS and private industry continues.

With a constant increase in the demand for commercially produced lithographed plastic, cartons and containers of all sizes and shapes, advertising specialties, playing cards, games, toys, signs and book covers, to name only a few, ML believes that the details presented here should contribute some vital information to the commercial lithographer engaged in this type of production and bring to his attention some of the latest developments available with respect to plastic inks.

Pumice Powder

THE Development and Test Division of AMS recently completed a study to determine suitable abrasives for machine brush graining of zinc and aluminum lithographic plates. Although current plate processing at the



Weighing pumice on analytical balance after abrasive has been dried in oven.

AMS base plant in Washington permits the elimination of graining equipment (See article on *Pre-treated Rub-on Plates*, ML, May 1960), this study was part of AMS general research for the trade and the results are made available to field units using brush graining equipment,

which is still considered a relatively new method, and to other government agencies, technical associations, trade consultants and to private industry.

After comparison with several imported and domestic abrasives, the material selected by AMS was imported Italian pumice. From all previous experiments with abrasives, it had been determined that aluminum plates require a considerably finer grade of pumice than zinc, to produce a quality surface on the plate. These tests made available considerable information concerning grading percentages that could be expected from shipments of pumice powder, plus showing the advantage of testing and grading abrasives and properly marking each container as applicable to specific metal, for economy and time saving in graining operations.

Pumice powder is supplied commercially in various grades and according to particle size, and the product suitable for lithographic plate graining varies from grade FF through grade FFFF.

In conducting these tests, AMS had ordered a shipment of FFF grade pumice and due to "spot-check" testing and the wide variations resulting, a complete and elaborate shipment test using an analytical scale and a drying oven, etc., was made from 41 bags of pumice, each containing slightly over 100 pounds of the abrasive.

The overall purpose of the examination was to correlate the performance of various grades of pumice with the resultant quality of brush-grained plates produced from the examined abrasive.

After findings were posted, production personnel soon were able to order the most desirable grade of pumice for use with the type and thickness of metal to be brushed grained.

It is not likely that very many litho firms or plate grainers use pumice in any quantity, since the use of brush graining is still fairly limited, but for those interested in pursuing the subject in detail, it is suggested that they secure copies of Federal Specifications on Ground Pumice and Standard Testing Sieves, which may be procured from the Superintendent of Documents, Washington 25, D.C., at five cents each. Order items, SS-P-821 (Pumice) and RR-S-366 (Standard Testing Sieves).★

*This is the final article
in a series of four devoted
to special developments at
Army Map Service that are
of general interest to the
lithographing industry.*

printing house **Craftsmen**

holding 41st convention Aug. 7-10

CRAFTSMEN from all parts of the United States and from several foreign countries are assembling in Atlanta, as this issue comes off press, for the 41st annual convention of the International Association of Printing House Craftsmen.

The conventioners are convening at the Atlanta Biltmore Hotel, Aug. 7-10.

Perhaps never before has this group offered such a widely diversified program of educational talks and clinics for its members. Prime emphasis is on letterpress and lithography, of course, but attention is being paid, too, to rotogravure and flexography as well. There will be discussions of package design, training personnel, and the increasing shift from sheet-fed to rotary printing—both in letterpress and offset.

Practical Sessions

Further, there will be the familiar shirtsleeves sessions designed to give printers and lithographers practical, money-saving ideas that they can take home and apply in their shops. Among these sessions will be two of major interest: "How to Make Money in the Composing Room," at which Carl Ford, of the J. W. Ford Co., Cincinnati, will be a leading speaker;

and "There Is a Simpler and Better Way of Doing Almost Anything!," a clinic to be moderated by Harry M. Faunce, a Craftsmen officer.

Other Topics

Other facets to be considered are improvements in duplicate plates, by Floyd Larson, of the International Association of Electrotypers & Stereotypers; and a special clinic devoted to discussions and demonstrations of four interesting new products and methods for the graphic arts. This panel will include the following:

Photomodification Camera—Alvin Pollard, Statmaster Corp., Hialeah, Fla.;

Photopolymer Plates—Hugh Gage, DuPont Photoproducts Division, Philadelphia;

Brightype—George Morrison, Ludlow Typograph Co., Chicago; and *Wrap-Around Plates* — Charles Wortman, Harris-Seybold Division, Harris-Intertype Corp., Cleveland.

Keynote address will be delivered by Arthur L. Harris, vice president of the Mead Corp., on Monday morning.

Other talks and clinics, of interest to lithographers, include: "How Does Web-Offset Get That Way?," by Albert I. Love, of Foote and Davies,

Inc., Atlanta; "Offset Platemaking with the New Materials," by Albert Materazzi, Litho Chemical & Supply Co.; "Problems and Progress with Trimmers, Cutters, Collators," by M. S. Burroughs, The Dexter Co., Division of Miehle-Goss-Dexter; "Camera Magic in the Printing Processes," by Bernard Halpern, DuPont Photoproducts Division, Philadelphia; and "On the Press: Offset," by Henry C. Daniel, Atlanta Lithograph Co.

Social Activities

The Craftsmen's convention always is strong on social activities for members and their wives and children. This year an Old South Party, golfing, a Southern style buffet supper, a theatre party to see a pre-Broadway showing of "Tom Sawyer," and the annual banquet are included on the social program. In addition, there will be a special tour of Atlanta homes and gardens and, for the children, a bus trip to the cyclorama painting "Battle of Atlanta."

Of special interest at the final educational session will be a talk on printing on films and foils, a topic that has been gaining increasing interest among printers and lithographers in recent years.★

PHOTOGRAPHIC CLINIC

By Herbert P. Paschel
Graphic Arts Consultant



Comments on Color Scanners

Color Scanners

Q: I understand there are several different electronic color scanners now in use. Can you tell me how they operate?

C.V.B., BETHESDA, MD.

A: In order to simplify matters let us first consider the points of similarity. All of the scanners to be described systematically illuminate the subject with a very fine point of light. The light modified by the subject is converted into electric impulses. These impulses are then analysed by a complex electronic circuitry and modified according to the correction factors built-in. With machines in which the scanning light is also used as the exposing light, the corrected impulses modify the intensity of that light (feedback principle). In others the modified impulses vary the intensity of a separate exposing light.

Despite differences in the electronic circuitry, the end result is basically the same for all scanners—a corrected set of densities. But the various scanners differ radically in the type and extent of the correction, the size and nature of the subject matter, the size of the corrected image, and the type of base material (glass or film) which can be used for the final images, etc.

The following are the scanners that are in commercial use or are commercially available. The corrected images are continuous tone.

It is impossible for Mr. Paschel to give personal replies by mail, but all questions will be answered in this column as soon after receipt as possible. The columnist also is available to the trade as a consultant for more complex litho problems.

PDI-Springdale Scanner: This is a rotary scanner that produces four color corrected film negatives from color transparencies only. Maximum size is 8 x 10". Copy to image ratio is 1:1. This machine is not marketed for sale. The industry can obtain scanned negatives from the PDI laboratories in various parts of the world.

Hell-Colorgraph: This is a flat-bed scanner. Corrected negatives or positives, on glass or film up to 12 x 15", are generated from a conventional set of tri-color separation negatives.

HPK-Autoscan: The present available model is a combination of process camera and modulated, scanning light source. The device produces color corrected separation negatives direct from reflection copy. The camera section permits enlargement or reduction within the limits of 150 to 33 percent. Maximum copy size is 24 x 24"—maximum image, 16 x 20". The final images may be on

glass or film according to the camera back selected.

LogEtronic Color Separator: This is essentially an enlarger in which the conventional light source has been replaced by a cathode ray tube. The device functions in a manner similar to the HPK scanner. This machine produces color corrected, continuous tone separations on film or glass from either positive or negative color transparencies, at enlarged or reduced scale.

Crosfield Scanatron: In effect this instrument makes corrected contact positives from a set of conventional separation negatives. This is accomplished by scanning the separations simultaneously but exposing only one positive at a time.

It is obvious that the last three scanners all operate on the same basic principle — a flying-spot scanning system and the feed-back principle of light modulation. All three instruments produce one corrected image at a time. The PDI and Colorgraph scanners generate all four images at the same time. The LogEtronic, Autoscan and PDI scanners work direct from original copy; the other three require that regular separations be first made with conventional equipment.

Masked Separations

Q: No matter how carefully I control my operations I can't get consistent results in making masked

separations from color transparencies. Sometimes one set in a group will be way out of balance while the rest are satisfactory. I can't figure out what is wrong.

C.A.B., PITTSBURGH

A: There may be nothing wrong with what you are doing, or how you are doing it. The trouble may center in the transparencies themselves. Perhaps you don't realize it, but your masking and separation technique is based on a particular balance of the dye layers in the transparency. When this balance is substantially the same for all the transparencies you separate, the results should be fairly uniform. But the standard balance may not prevail for each and every transparency that comes your way. Because of aging, reciprocity failure or processing defects, the balance of a color film may be distorted and yet look pleasing. But these distortions would be recorded, and possibly exaggerated, in your separations.

If you are satisfied that the exposure and processing conditions are constant, and you haven't switched emulsions from one set of separations to the next, an off-beat transparency may be the explanation for this inconsistency. But before you accept this as the sole cause, you would be wise to double check the variable aspects of your technique.

Emulsion Variables?

Q: Is it possible that a photographic emulsion could vary enough in sensitivity from one batch to the next to cause serious exposure errors?

J.E.V., NEW YORK

A: It could happen, of course. Aging, improper conditions in storage or in transit, etc., could cause a change in emulsion sensitivity. If you are suggesting that films (or plates) are being manufactured, and sold, with wide variations in speed, this is not very likely. Manufacturers are not inclined to deliberately stir up a hornet's nest. From bitter experience they have learned it is cheaper to discard a defective batch than to recall and replace it. To avoid this, photosensitive materials

are rigidly controlled in manufacture and subjected to many quality control tests. Even so, a defective batch may get out inadvertently.

Some tolerance is allowed at the manufacturing level. In the case of speed, let us assume that a variation of 10 percent, plus or minus, is the range within which the material is considered standard. If you get two batches that are at the extremes of the tolerance scale, you would, of

course, have a 20 percent difference in exposure response.

If the exposure error you speak of is in the order of 2x, or 3x, or more, I would suspect some other cause. If you've changed developers, this could be a contributing factor. Carbon arcs too, have been known suddenly to increase or decrease in efficiency. Any number of other factors could have changed unexpectedly to cause an error.★



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DRY ink offset preventer.

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measuring ink and printing qualities for **QUALITY CONTROL**

By *Otto C. Stoessel, Jr.*

Headquarters
Aeronautical Chart & Information Center
Air Photographic & Charting Service (MATS)
United States Air Force
St. Louis

PRIOR to implementation of statistical quality control in our lithographing of aeronautical charts, it was necessary for us to establish a means of measuring the various qualities pertinent in this operation. This article is intended to present the factors of measurement that we feel are essential in the printing operation before adequate statistical control can be installed.

Many of our charts are viewed together, although they may have been printed many weeks, months or even years apart. Because of this it is necessary to refer or associate all color to a common numerical value that will remain constant from one printing to the next and from year to year. It is also necessary to refer other factors of printing quality and ink to this same system, because color by itself, without considering reflection gloss, opacity, light fade or printing qualities, could not be the complete answer.

Additionally, since we were preparing a specification to maintain and resolve our color and other visual qualities, it was also important that the working properties of the ink be maintained to specific standards for overall efficiency in the actual printing operation. The pop-

ular method for a printer to test printing inks is by actual performance on the press and for the purchaser of printed material to evaluate the printed sheet. This is not always feasible with the present high hourly cost of press time or practical in consideration of maintaining standards by means of the old "eyeball" method and insuring consistency of standards day in and day out.

It is therefore desirable to be able to conduct the necessary tests on the inks preliminary to actual use on any press equipment. It is also necessary to establish a numerical means of measuring these qualities prior to the initiation of any of the printing phases. For many printing requirements (both from the printer's and the purchaser's viewpoint) preparing a quality control specification is unnecessary as each job is received independent of previous or subsequent printings. In these cases perhaps a rigid quality control is less necessary. However, this is not the case with the map and chart producers as we are all much like the packaging industry. The chart user, like the man in the retail store sees a number of printed pieces all at once and thus would immediately notice variance in color.

The means presented here for the evaluation of the factors involved in printing quality are divided into two basic considerations:

1. From the viewpoint of the purchaser of printing matter who has the ultimate responsibility of quality standards.

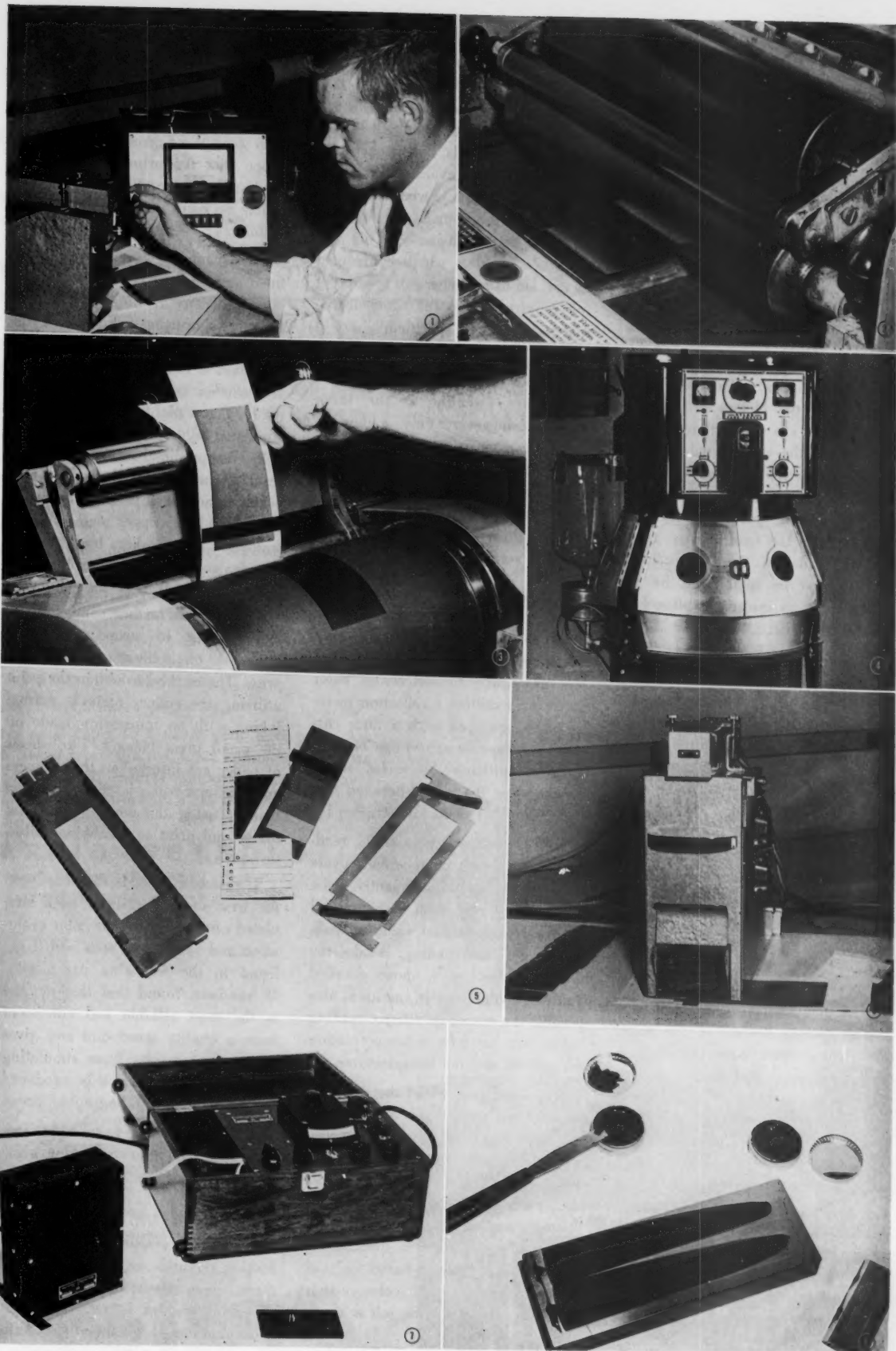
2. From the viewpoint of the lithographic printer who must establish and maintain qualities in consideration of the requirements given him.

We at this installation have a requirement to be both a purchaser and printer of lithographic material and

In the Photos

1. **Operator** inserts one of the 11 filters before making a color reading of the simulated print.
2. **View of the proof press** and the type high copper plate in position prior to making a print.
3. **Making the simulated print** after controlled inking of copper plate and ink transfer onto blanket. Second sheet of paper prevents inked copper plate, which is used as support, from printing on back of simulated sheet.
4. **View of the Fade-O-Meter** used in testing ink fade.
5. **Test prints** after various degrees of exposure.
6. **Operator makes direct reading** of color, as printed over a black bar, to determine opacity.
7. **Making density reflection reading** of simulated print with light source at a specific angle of incidence to determine gloss.
8. **Comparative view** of a poor grind value ink on the right and a normal grind ink on the left. Note abrasive streaks of ink on the right side of grind plate.

From a talk presented at a recent meeting of the St. Louis Litho Club.



as such, had the requirement of establishing a system which will work in consideration of these two interests. The intent is for a system to consider both the lithographer and the purchaser and insure that each is speaking the same language and has the same means of evaluation.

The purchaser of quality printing as well as the lithographer of quality printing requires an evaluation into two basic categories which are:

1. *Quality Measurement of base material* (i.e., paper, ink and other finishing supplies)—This is a measurement of the factors of raw material which are essential in the fulfillment of the quality printing application. In this case we are interested in those materials which are relative to the operation which directly affects the final quality. Quality standards on the "in process" phases must be established by the lithographer to insure compliance to the final standard.

2. *Quality Measurement of printed material*—This is a measurement of the finished product which includes measurements of the human, mechanical and general lithographic process of applying the raw materials into a finished product.

Quality Measurement: Base Material Lithographic Inks

The measurement of the quality factors in the base material includes specifically the material the printer prints on—paper—metal—corrugated board—and the material the printer prints with—lithographic ink.

The quality control in the paper and many other base materials is well established and known to purchasers and printers alike and needs no explanation except to point out that it is equally important to insure that the quality systems available for measuring the printing base apply in establishing the product quality.

The material which is as important as the printing base is the printing ink. Certainly the value of the printed product to requirements can be no better than the combination of print-

ing base and printing inks, as these two factors are the product.

The printing base material is specified and controlled positively by the established methods, but no such universal system is available in lithographic inks which is what the public first "sees" in any package, container or other printed material. This was the basic problem which confronted us and led to our means of specifying ink requirement to the same degree that paper can be specified.

Lithographic inks can be divided into nine major categories, all of which are essential to the lithographer; however, only a few of them are essential to the purchaser. The factors in ink specifications and means of testing are listed as follows and noted as to requirement from both a printer's and a purchaser's standpoint.

1. *Color—Purchaser and Lithographer requirement*—The first requirement is that an ink must yield the correct color when printed. The test procedure to determine color correctness utilizes a reflection meter which is equipped with a filter carriage from which values can be read directly, utilizing 11 series filters which cover the range between 420 and 650 millimicrons (Illustration 1.)

This method will give an 11 reading value of each color which covers the visual spectrum sufficiently to be used consistently with any and all colors. The additional value of making an 11 filter reading, besides the obvious effect of a more detailed analysis of the color in question, also permits the use of this direct reading value as a basis for color correction for printer and ink manufacturer.

By simple plotting of the standard requirement on a graph and plotting the color sample of the matching ink, an adjustment factor is possible based on the numerical differences in each particular wave length. It is the printer's responsibility for each color and each requirement in question to establish a tolerance based on the range of quality and color match that is necessary for the job in question.

It is the intent of this installation to establish a basic tolerance of the highest plus difference and the lowest minus difference of not more than .08 optical density with a stipulation that the primary millimicron reading for the particular color shall be off no more than one-half of this amount, or .04 optical density.

The primary wave band is defined as the one which has the lowest optical density reading and will be the most significant band from a visual comparison standpoint. However, to obtain a reflection reading which is consistent and reliable, it is mandatory that a high quality, consistent, simulated color print be made which will give predictable and consistent results. The print used for this purpose is made on a proof press utilizing a type-high copper plate. The ink is applied to the rollers by a measuring device and has controlled distribution (Illustration 2).

The print is further controlled by measurement of proper ink film thickness on rollers on the proof press. The method to obtain the print utilizing the copper plate is normal inking with an impression made on the proof press blanket. Two sheets of paper are inserted in the grippers and the impression is taken from the blanket using the copper plate and the second print as a backing (Illustration 3).

The second sheet is discarded and the first sheet is utilized as a simulated offset sheet for the color evaluation and some other tests which are listed in the following paragraphs. It has been found that this method is the most reliable and consistent from a quality standpoint and gives us the best results from simulating the actual print that will be produced on a production lithographic press.

It is also desirable to take the reading from the simulated print while the ink is wet and additionally, when the ink is dry. Taking the readings while wet will help the quality control when it is applied as direct reflection readings on the press equipment, when measurements are necessary while the ink is wet. The actual determination of whether the specifi-

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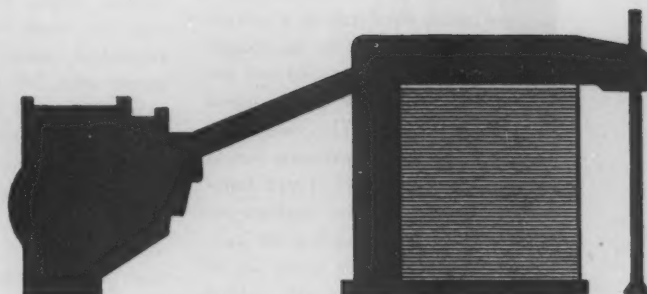
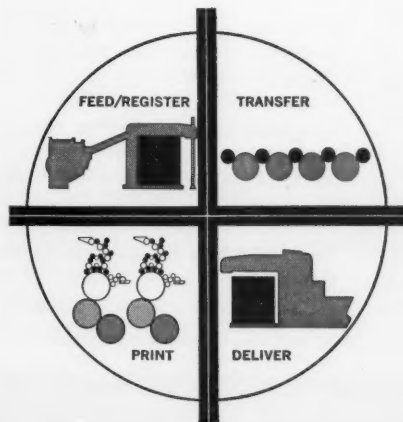
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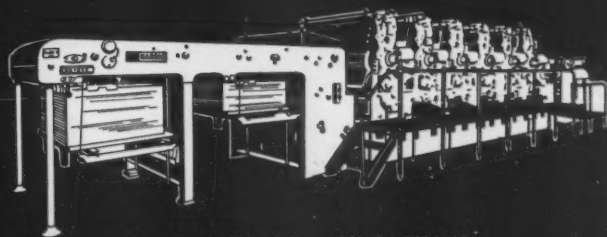
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cations have been met is performed after the ink is dry.

Experience has indicated that the tinting strength evaluation which has been normally accomplished by use of a bleaching compound at fixed reduction ratios can be evaluated at the same time as color by simply establishing proper tolerances in the eleven millimicron readings which are in themselves a measurement of tinting strength. It has been determined that with the quality and consistent print possible by this print method, and by proper standards in the tolerances of optical density readings in the specific millimicron values, the tinting strength is predictable without applying the bleaching compound.

2. Light Fastness—Purchaser and Lithographer requirement—How well a given chart or map will hold its color over the extended life of the product can be predetermined by the light-fastness or Atlas Fadeometer test (Illustration 4).

The light fastness test is made by obtaining a simulated print sample in the manner previously described for use in ink color testing, a portion of which is masked with an opaque black paper, so that exposed and unexposed portions may be compared on the same print. The instrument consists of numerous exposure panels spaced around a carbon arc lamp which employs special carbons to produce an intense ultra-violet ray. Exposure to the Fadeometer for a given number of hours will yield a comparative evaluation of how the color may stand up under actual sunlight (Illustration 5).

Roughly, one hour in a Fadeometer equals five days of exposure to sunlight. To convert the results to a numerical value it can be established that color quality as established will be maintained when the ink is subjected to a given number of Fadeometer test hours and subjected to the 11-filter millimicron color test.

3. Opacity—Purchaser and Lithographer requirement—Opacity of ink is important when there are large areas of one color overprinting

another color and the detail of the underlying image must be visible through subsequent colors. This is the case in chart production in which many colors and printed, with the preceding images to be readily apparent through the subsequent colors. In this specific instance only a transparent ink will give satisfactory results. In such instances it is desirable to determine the opacity of an ink in degrees of percent in which the underlying imagery can be viewed. If some requirement in the printing field needs an opaque ink, the same means of measurement could specify the opacity required in this respect.

The test used to measure this factor utilizes a reflection meter and the simulated print as previously described. To determine the opacity of a specific ink the reflection meter is set at 100 percent on the color as printed on white paper. With this reading set at 100 percent, a second reading is made on the simulated print in which the color is measured where it has overprinted a black band (Illustration 6).

The percent indicated in the reflection meter, when read directly over the black bar, represents the percent of opacity of the ink. Transparent inks, for our purpose, have an opacity value of 5 to 20 percent.

4. Gloss—Purchaser and Lithographer requirement—The gloss of the ink or its reflection value is a quality which is either desired in some printing or the reverse in the case of most chart printing where the glare or reflection factor is undesirable and a lack of gloss is more the intent. A means of measuring the reflection or gloss value of a particular ink is obtained by use of a reflection meter in which the search unit is placed at a specific angle of incident and the reading read directly. This will give the reflection value of the surface of the particular ink (Illustration 7).

In terms of desiring a non-gloss ink, the requirement should be that the ink should not read over a given percent in the gloss reading, or if it is desirable to have gloss, it should be indicated that the gloss effect should not be less than a given per-

cent. Since we normally do not want a gloss ink we specify that the gloss should not be over 5 percent.

5. Grind—Lithographer requirement only—the Fineness of grind has a direct bearing on the smooth working qualities of the ink and indicates the degree the ink was milled and the dispersion of pigments. Poorly milled ink will more readily change color with age. The quality of a finished product, especially fine-line detail on halftone as well as large coverage for solid areas, will depend to some extent on the grinding of the ink used. Additionally, a relatively coarse ink, aside from the printing qualities, will have a wearing effect on the lithographic plate and could be a factor in the breaking down of the quality and shortening of the plate life.

The grind standard should be so established that the requirement indicates a grind reading which is somewhat less than the ink film thickness which is normally carried on the form rollers. It is obvious that if the grind were coarser than the ink film thickness on the form roller, considerable difficulty would be ap-

(Continued on Page 103)

In the Photos

9. Operator engages rollers of Ink-O-Meter with left hand to create torque while he measures the torque or tack with right hand.

10. Tightening measuring cup to obtain a specific volume of ink for measurement to obtain specific gravity.

11. Placement of test sample in oven for controlled aging test.

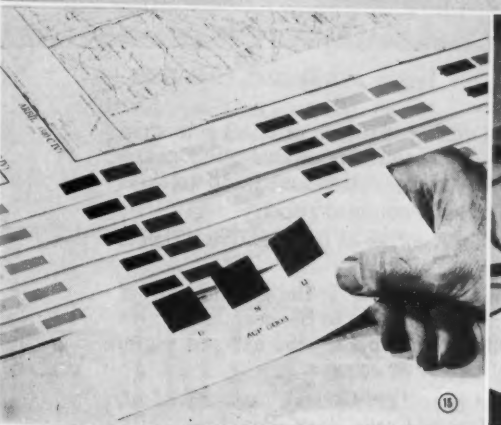
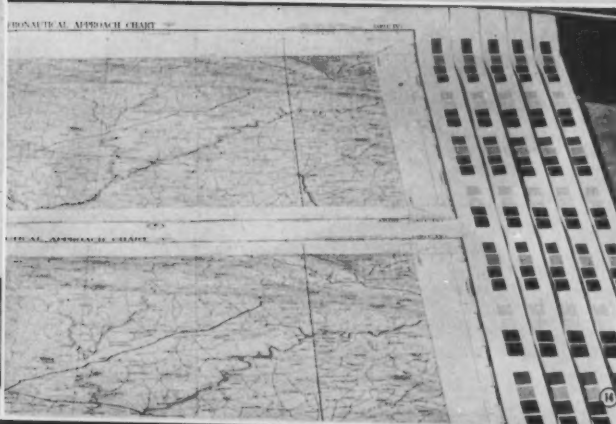
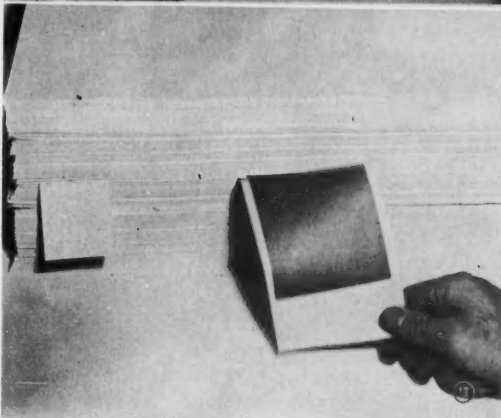
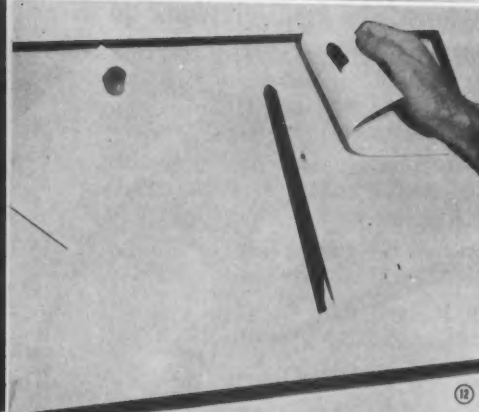
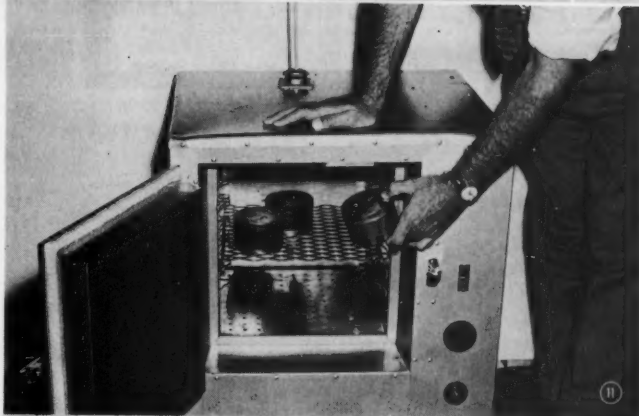
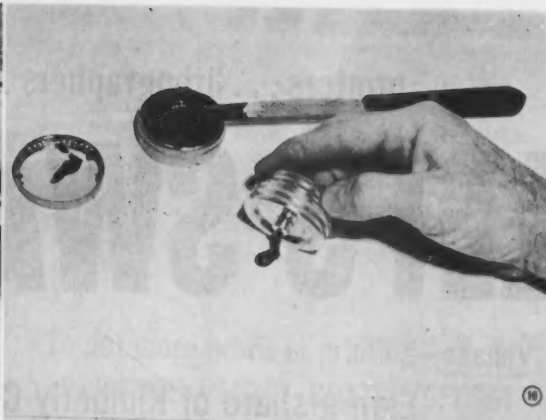
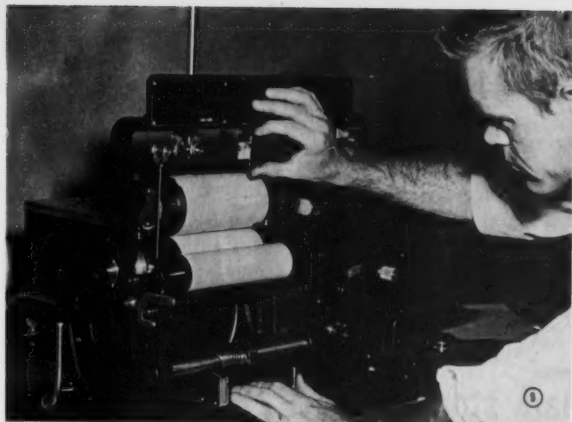
12. Operator makes the sheet drying test by transferring draw-down from glass onto paper after specific number of hours. If the ink transfers successfully it has passed the test.

13. Operator rapidly removes the simulated print from beneath 1,000 sheets of offset paper. No transfer of color on sheet immediately over simulated print after withdrawal indicates satisfactory drying time.

14. Printed material with color blocks for color evaluation.

15. Evaluating color with a color comparator.

16. Evaluating color by instrumentation.



printers . . . lithographers . . .

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*Fred Gebhart, Superintendent,
Grant Dahlstrom: Castle Press, Pasadena, Calif.*



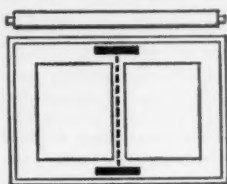
Stock earner No. 11!

Potatoes purify pots—To clean lead pots, put a potato on a steel rod and hold it on the bottom of the hot lead pot. This causes the dirt and settlings to boil to the top where they can be skimmed off.

*R. E. Lineberry, Manager, Printing Dept.,
J. P. Stevens & Co., Inc.,
Greensboro, North Carolina*

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Roller-saving rule—When running rollers over a perforating rule which is perpendicular to them, the rollers are often cut by the rule. This damage can be prevented by adding a piece of rule perpendicular to and at each end of the perforating rule to protect the rollers from being cut.



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Photography, Tone and Color Correction

HOW TO GET BETTER HALFTONE CONTRAST. Charles C. Ball. *Graphic Arts Monthly* 31, No. 12, December 1959, pp. 66, 68, 2 pages. Cures are offered for some of the troubles that cause halftones to lose their snap. Included are: dust which can cause flare, dirty lenses, shiny surfaces in camera, improperly prepared developers, dirty or warped filters, uncoated lenses and dirty screens.

THE PRINCIPLES OF FILMSETTING. Frank H. Smith. *Perspective* 1, No. 4, 1959, pp. 376-385, 10 pages. First some fundamentals of printing processes, and of type composition are reviewed and reasons for the entry of filmsetting into the picture are given briefly. The four principal forms of filmsetting machines are listed as the Photon, the Linofilm, the Fotosetter and the Monophoto. Line diagrams are used to illustrate the general principles of filmsetting, and to show how each of the four machines listed applies these principles.

GIVE THE STRIPPER A TRANSPARENT NEGATIVE!! Dick Arden. *Graphic Arts Monthly*

31, No. 12, December 1959, pp. 70, 72, 2 pages. Author points out the desirability of negatives with some visual transparency for registering and placement in the flat. Two procedures are given for converting negatives to an image color which is sufficiently transparent to the eye for the convenience of the stripper, yet completely opaque to the light that burns in the plate. One procedure uses Quicktone, which gives a golden brown tone, the other uses Kodak Magenta Developer.

Planographic Printing Processes

MORE HELPFUL HINTS FOR THE STRIPPER. K. W. Beattie. *Modern Lithography* 26, No. 8, August 1958, pp. 34, 35, 36, 3 pages. Time saving tips include center mark on copy, duplicate negative or auto-positive and low cost step and repeat plates.

Paper and Ink

***KNOWLEDGE OF PAPER FOR THE LITHOGRAPHER.** Anon. *Offset*, Vol. 14, No. 10, May 16, 1959, pp. 209-10(a); No. 11, May 30, 1959, pp. 233-4(b); No. 12, June 13, 1959, pp. 257-8(c); No. 13, June 27, 1959, pp. 279-80(d) (in Dutch); *Printing Abstracts* 14, No. 10, October 1959, Abs. #3372, p. 788. (A) Some data are given

on single- and double-sided coated paper, with and without a glossy surface, and also duplex and coated duplex. (B) Data are given on papers such as bible, manila and copy papers and a discussion of the difficulties of paper is begun. (C) Offset printing and some faults that arise in it, such as toning over all the plate and grey and smudged prints, are discussed. (D) Uneven ink absorption by the paper is discussed.

Lithography — General

TROUBLES WITH RUNNING SOLIDS. Theodore Makarius. *Modern Lithography* 26, No. 5, May 1958, pp. 73, 125, 126, 3 pages. In reply to an inquiry for an explanation of causes for greasing and unevenness in printing reverse lettering clean and sharp, the author stresses the need for carefully adjusting for minimum even ink flow. Even so, some presses have poorer distribution than others which leads to more critical adjustment being required. The most common mistake consists of attempting to run an excess of ink to make up for a deficiency of pigment strength. In some cases management may decide to run such a color twice in order to avoid trouble. Unless the ink is made to suit the job a pressman's efforts to reduce it with compound or oil may cause greasing, ink breakdown and dirty dampeners. This in turn may lead to scum drying on non-image areas of the plate when the press is shut down without having immediately gummed the plate. A second inquiry concerns copperized aluminum plates blinding after 30,000 impressions. No trouble was reported in connection with red plates but three black plates were submitted. These gave evidence of several causes of the trouble. Of these, abrasion from accumulated lint on the blanket from the newsprint stock being run, for which frequent blanket washes and replacement of fountain ink is suggested as a remedy. Two plates appeared to show gum cracks caused by gumming the plate with insufficient ink over the image. In conclusion, the author states that there just isn't any procedure for rubbing up a plate. Careful packing must be done to prevent excess wear on local image areas since damage can rarely be repaired.

STORING OFFSET PLATES CAN BE PROFITABLE — BUT NOT ALWAYS. Charles W. Latham. *Inland and American Printer and Lithographer* 144, No. 5, February 1960, pp. 54, 55, 56, 3 pages. Author first points out the relationship of trade customs to plate ownership in the case of reruns. Actual plate storage involves the method of storage (2 are illustrated) keeping properties of the plates, and the book-keeping involved. The storage and reuse of negatives and flats are discussed in relation to their keeping properties, and the paper work involved. It is pointed out that cost factors should be weighed in making the decision as to whether plates should or should not be stored. The operations involved in preparing a plate for storage are given and discussed.

(Continued on Page 111)

THROUGH the GLASS



THE debate over what is an optimum number of trade exhibitions (see page 34) has a number of bedfellows. There's also the controversy about too many trade association and too many meetings and conventions. Then there is the often discussed situation of "too many trade magazines."

The latter question has never concerned ML very much. We have been covering the litho field—and only the litho field—for more than 25 years. We have always felt that the first judges—the members of the industry—are the ones best equipped to determine the value of an industry publication. If they like what they read and renew year after year, then it usually follows that a predominant number of suppliers will follow this cue and invest their advertising dollars in the publication.

Changes of title (happily, it seems that the "... and Lithography" craze has just about exhausted itself) and fancy promotional pieces don't mean a thing if the publishers aren't delivering sound editorial material to their readers and a prime market, shorn of waste circulation, to their advertisers.

A stamp collector who should really know his business disagrees with some of the statements contained in the article "Stamps: Two Billion Lithographs a Year!" (July, page 48.) The correspondent, George W. Brett, vice president and Washington representative of the Bureau Issues Association, Inc., and association of collectors, declares that, while lithography is used in many countries to produce stamps, it is not used to anywhere near the extent indicated by author Tom Burrier, himself a collector.

More often than not, says Mr. Brett, intaglio is the process used to produce stamps. Mr. Brett questions other statements about number of stamps printed in the United States and number of commemorative stamps issued each year. In

each case he finds the figures a bit inflated.

Among the many news dispatches from Castro's Cuba last month was one that didn't make the front pages; nevertheless it was of utmost concern to a Havana lithographer—Frank Lagueruela—who has been a frequent attendant at NAPL conventions. A news report announcing the suspension by Reader's Digest of its Spanish-language edition on the island because of production difficulties, did not mention Senor Lagueruela nor his company — Editorial Omega — by name, but it is widely known that he has been producing the edition on his giant Levey common-impression cylinder web-offset press. The magazine will henceforth be produced in Mexi-

co, because the Cuban National Bank has "refused permission to import essential materials."



Edward Stern & Co.'s Walter Arader, left, presents a cash award to artist William J. Woods, creator of "Best in Show" painting at recent Rittenhouse Square (Philadelphia) Clothesline Art Exhibit. At center is Robert J. Cress, president of the Walnut Street Association. Mr. Arader, president of Stern's, believes that "business firms should take an active interest in sponsoring exhibits and furthering the careers of creative artists."





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You can give yourself a break, if you take some definite steps to improve conditions in your litho department or improve your product by installing some new Wagner Equipment.

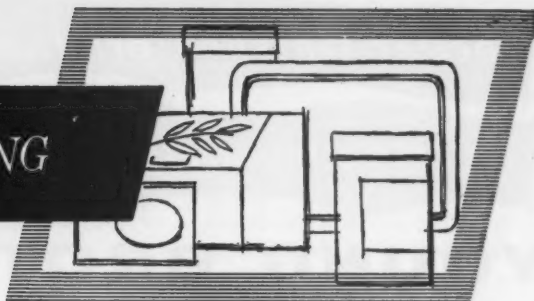
Make a date with Wagner Engineering before you take your vacation — and then relax and enjoy yourself.

Consultation without obligation.



Wagner Litho Machinery Division
NATIONAL-STANDARD COMPANY
Secaucus, N.J.

METAL DECORATING



Rheem Completes New Coating Process

IMPROVEMENTS in the manufacture of lined steel pails have been obtained with completion of special installations at plants of the Rheem Manufacturing Co. The development, engineering and installation of this special equipment completes Rheem's program for centrifugal application of specification linings for steel pails, manufactured in high volume.

The program was described by E. F. Paquette, vice president and general manager of the container division of Rheem.

"While the pail manufacturing industry has accomplished much in the precision manufacture of pails, uniform application of high quality linings remained a bottle neck, par-

ticularly in view of the high-speed production requirements of pail manufacture," according to Mr. Paquette.

He added that production rates in the manufacture of pails, of one to five gallons, are usually more than three times the speed of equipment used in the manufacture of large steel drums. Even more important than speed of production is the requirement of exacting quality control to assure users of pails dependable linings, properly applied and free of pin holes, thin spots and foreign matter.

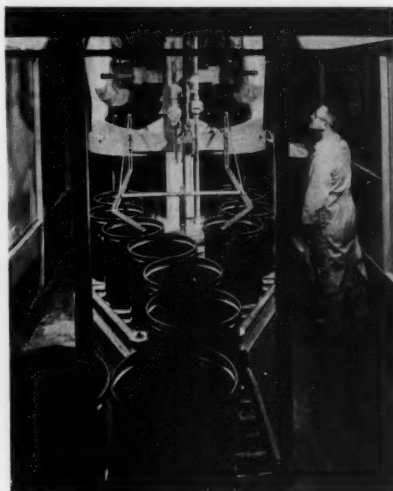
Centrifugal Lining

One of Rheem's accomplishments, introduced early in 1957, was the

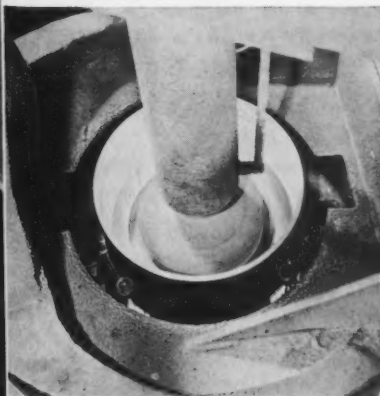
centrifugal lining process for the application of specification linings to steel drums. The new pail lining approach is grounded in more than three years of actual use of the centrifugal lining process in drum manufacture, according to Mr. Paquette.

A completely new engineering job was done in the centrifugal pail lining equipment, to provide the advantages that had been established in centrifugal lining for drums: uniform thickness, even in such critical areas as swedges and bottom double seams, freedom from foreign particles in the lining, absence of air bubbles and pin holes, etc.

The centrifugal pail lining equipment that has been installed in Rheem container plants will deposit a con-

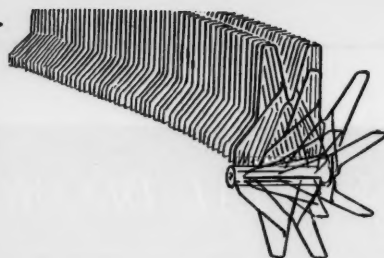


Twin line of five-gallon steel pail bodies (left) moves automatically into position for application of specification lining by the Rheem centrifugal process. Spinning rotor (center) of Rheem centrifugal pail lining equipment is shown as the body of a five-gallon pail starts its pass.



better finished products

... maximum efficiency



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for every *Metal Decorating* requirement

YOUNG BROTHERS Metal Decorating Ovens, built in a variety of types, are known for their excellence because Young Brothers engineers have a fundamental understanding of the baking and drying problems of the Metal Decorating Industry. Their "know-how" is based on 60 years of experience building individually designed ovens for all baking and drying processes.

A metal decorating oven is a highly mechanized production unit in a specialized field — and it will only perform to maximum efficiency if it has been built by men thoroughly experienced in every phase of oven engineering.

Through their specialized experience, Young Brothers engineers constantly develop new and better methods of handling, heating, and moving air . . . for faster, more efficient production . . . for more automatic and accurate controls so vital to the synchronized operation of the production lines. New light weight rigid, tubular wickets reduce conveyor load and help to eliminate sheet marking. Reduces necessity for wicket preheating.

You can be sure of the best when you select a Young Brothers Oven because it is the product of the finest experience in the industry — that is why it will bring added profits out of your production.

Investigate the advantages of Young Brothers Ovens today — details are available to you without obligation.

YOUNG BROTHERS CO.

1839 COLUMBUS ROAD



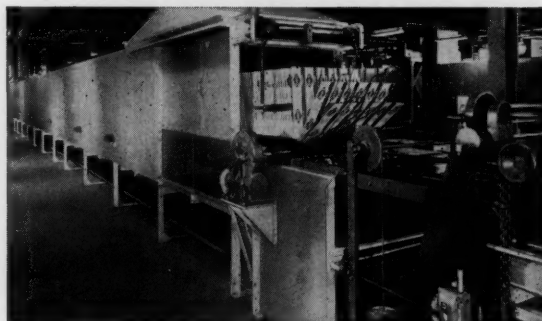
CLEVELAND 13, OHIO



Battery of large, high speed D.E.F. Metal Decorating Ovens



High speed, combination D.E.F. and D.I.F. Metal Decorating Oven



D.I.F. Metal Decorating Oven with zone control and recuperative cooling

trolled thickness of lining material on the interior of pail bodies. Instead of being sprayed by air, the lining material is atomized and deposited by centrifugal force.

After being fed into a disc-shaped applicator head, revolving at high speed, the lining material is impelled centrifugally onto the wall of the container. This method permits lining application without the use of turbulence-causing air that might entrain dirt and trap air bubbles between the lining material and the steel body of the pail.

Less Solvent Needed

The centrifugal dispersion of lining materials onto the interior of pail bodies in the new Rheem process has the further advantage of requiring less solvent in the coating formulation. Without the necessity of being propelled by air, the lining mixture as it is impelled from the applicator, the Rheem official explained, is free of any excess of solvent that can be trapped in the lining, causing bubbles that break during curing and become pin holes in the finished coating.

The combination of lower solvent content and precision characteristics of mechanical dispersion give the advantage of more exact control of lining thickness as specified by the container customers.

Trouble-causing air turbulence is avoided also by the method used in handling the container body. In the new Rheem equipment, the pail body is elevated automatically on the same axis as that of the rapidly-revolving centrifugal applicator. Lining material is deposited during both the upward and downward travel, giving complete and uniform lining coverage to the entire length of the pail body. Thus, in not subjecting the container body to revolution during the lining application, another cause of dirt-entraining air turbulence is eliminated.

The centrifugal lining process, both in the application and curing of interior coatings, has the advantage of making use of natural physical laws, Mr. Paquette explained. Cen-

trifugal force is used to atomize and deposit lining material on the interior of pail bodies. "Then, in curing these linings, we are able to make use of the natural physical characteristics of the convection of heated air and efficient heat transfer." This combination of natural physical laws, along with completely automatic operation, "gives the result of freedom from human error, operator fatigue, distraction, etc."

He explained that immediately after the centrifugal application of linings, pail bodies are moved automatically into special high-bake ovens. Here on a moving oven floor the pail bodies are moved in vertical

position to allow each one to serve as a natural flue for the convection of heated air at carefully controlled temperature.

Travel Speed Regulated

In addition to the flexibility of controlling the heating of air to provide the required temperature for the specification lining being cured, speed of travel through the oven can be regulated for a range of optimum curing cycles.

Centrifugal lining equipment is in operation now at all pailmanufacturing facilities of the Rheem container division. Plants are located in Linden, N. J.; Chicago; New Orleans;

ACRO-FLEX

A FLEXIBLE METAL-DECORATING COATING



This new acrylic-enamel weathers well, retains its color, stays glossy-bright. Resists chemical action, chipping and abrasion. Investigate ACRO-FLEX. It's right from start to "finish"—on any metal.

GORDON BARTELS COMPANY
2600 Harrison Street • Rockford, Illinois

'BARTELS'



Several chemically different coating types are used as steel container linings. Careful selection of the proper lining for each product is the first step in the success of a lined container. Photo shows a series of lining failure types in contrast with linings both properly specified and correctly applied, illustrating the importance of correct lining choice.

Houston; Freeport, Tex.; South Gate and Richmond, Cal., and Tacoma, Washington.

Rheem is also known for the development and introduction, since the close of World War II, of the first application of lithography in full

color to the large steel sheets used to make shipping containers of capacities up to 55-gallons.

One example of Rheemcote lithography is an oil drum which is a large-size replica of the one-quart oil can from which motor oil is dispensed.★

Stern Discusses Birthday of Canning

THE history and development of the can industry which is 150 years old this year, was outlined last month at a Boston meeting by David Stern, treasurer and general manager of the Stern Can Co.

"In 1959, the can manufacturing industry turned out more than 43 billion metal cans, amounting to nearly \$1.8 billion worth of business," he said. "Twenty-five hundred different products from 135 industries fill these cans. Cans, in turn, consume steel at a rate second only to construction and automobile manufacture."

In tracing the development of the industry, Mr. Stern noted that "... the metal can was born out of war-time necessity. Nicolas Appert, a Frenchman, collected 12,000 francs from the conquering Napoleon Bona-

parte for his discovery of the canning process and, in England, Peter Durand was awarded a patent by King George III for his idea of using 'vessels of glass, pottery, tin, or other metals of fit materials' to transport and store foods preserved by Appert's method.

"New cans, new products, and new canning processes, along with increased demand, caused nearly every major industry to embrace this sturdy metal container. Foods, drugs, paints, oil, beverages and grooming aids are all packed in cans today and new uses for the ancient container are constantly being discovered. Aerosol cans, which only a short time ago sprayed only insecticides, today dispense more than 200 different products for home and industry and are growing rapidly.

Connors Reports Good Year

Connors Bros., packers of ground fish in Beaver Harbor, near Toronto, last year. The company packages its own fish products in decorated cans, using its own lithographing plant. The company also makes its own cans and keys, etc.

The can making plant was expanded in 1959 with the addition of several new pieces of equipment.

Connors established the quick frozen fish plant in 1958. Last year it processed a record quantity of 12 million pounds of ground fish. The company's main plant is at Black's Harbour with branch plants in New Brunswick and Nova Scotia.

Skinner Advances Three

Skinner and Kennedy Printing Co., St. Louis, has advanced J. Howard Pecher from secretary, to executive vice president of the company.

Robert J. Pecher was also advanced from assistant secretary to vice president and George L. Betker was elected secretary.

All other officers of the company were reelected.

St. Louis GAA Holds Picnic

The Graphic Arts Association of St. Louis will hold its 11th annual summer outing at Crystal Lake Country Club, August 18.

Golf, entertainment, and food will be the main features of the program.

Robert T. Wolff, Western Printing & Litho Co., St. Louis, is president of the association.

Crocker Advances Joyner

H. S. Crocker Co., San Bruno, Cal., has advanced William D. Joyner to manager of its Southern California territory. He had been manager of the company's Portland branch.

Mr. Joyner has been replaced in the Portland branch by Alfred N. Martin, who had been working in the company's Santa Clara and San Joaquin territory.

Ludlow Names Donovan Mgr.

Ludlow Papers, a division of Ludlow Corp., Needham Heights, Mass., has appointed Douglas E. Donovan manager of purchasing. He will be located in the home office at Needham.



For offset reproduction from a transparency by John Stuart Cloud. Shoes and bag by Joseph Antell, Boston.



Lithographic Papers

LUSTERKOTE
OFFSET ENAMEL
CAMEO BRILLIANT
OVERPRINT LABEL
FOTOLITH ENAMEL
CASCO ENAMEL
PRINTONE LITHO
SILKOTE OFFSET

This paper is Warren's Cameo Brilliant - Gloss • Basis 25 x 38 - 100 (200M)

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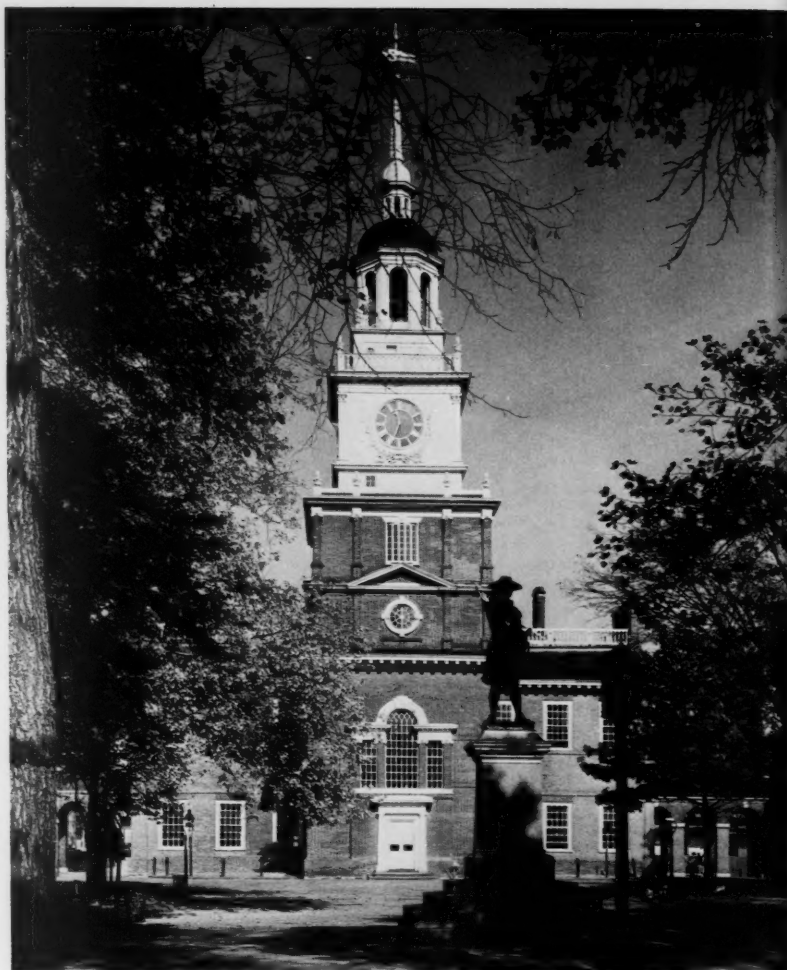
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Warren's Standard Printing Papers

ALBANY, N. Y.	Hudson Valley Paper Company
ALLENTOWN, PA.	Lehigh Valley Paper Corporation
ATLANTA, GA.	Sloan Paper Company
BALTIMORE, MD.	The Barton, Duer & Koch Paper Co.
BIRMINGHAM, ALA.	Stanford Paper Company
BOISE, IDAHO	Sloan Paper Company
BOSTON, MASS.	Zellerbach Paper Company
	Carter Rice Storrs & Bement Inc.
	The Century Paper Co., Inc.
	Lindenmeyr Paper Company, Inc.
BUFFALO, N. Y.	The Alling & Cory Company
CHAMPAIGN, ILL.	Franklin-Cowan Paper Company
CHARLOTTE, N. C.	Crescent Paper Company
	Caskie Paper Company, Inc.
CHATTANOOGA, TENN.	Virginia Paper Company
	Southern Paper Company
	Sloan Paper Company
CHICAGO, ILL.	Chicago Paper Company
	McIntosh Paper Company
	Carpenter Paper Company
CINCINNATI, OHIO	The Diem & Wing Paper Company
CLEVELAND, OHIO	The Petrequin Paper Company
COLUMBUS, OHIO	The Alling & Cory Company
CONCORD, N. H.	The Cincinnati Cordage & Paper Co.
DALLAS, TEXAS	C. M. Rice Paper Company
DAYTON, OHIO	Olmsted-Kirk Company
DENVER, COLO.	The Diem & Wing Paper Company
	Carpenter Paper Company
DES MOINES, IOWA	Western Newspaper Union
	Newhouse Paper Company
DETROIT, MICH.	Seaman-Patrick Paper Company
	Chope-Stevens Paper Company
EUGENE, ORE.	Zellerbach Paper Company
FORT WORTH, TEXAS	Olmsted-Kirk Company
FRESNO, CAL.	Zellerbach Paper Company
GRAND RAPIDS, MICH.	Quimby-Walstrom Paper Co.
GREAT FALLS, MONT.	The John Leslie Paper Company
HARRISBURG, PA.	The Alling & Cory Company
HARTFORD, CONN.	Henry Lindenmeyr & Sons
	Carter Rice Storrs & Bement Inc.
HOUSTON, TEXAS	L. S. Bosworth Company
INDIANAPOLIS, IND.	Olmsted-Kirk Company of Houston
JACKSON, MISS.	Crescent Paper Company
JACKSONVILLE, FLA.	Townsend Paper Company
KANSAS CITY, MO.	Virginia Paper Company
	Tobey Fine Papers of Kansas City, Inc.
KNOXVILLE, TENN.	Southern Paper Company
LANSING, MICH.	The Weissinger Paper Company
LITTLE ROCK, ARK.	Western Newspaper Union
	Arkansas Paper Company
LOS ANGELES, CAL.	Zellerbach Paper Company
LOUISVILLE, KY.	Louisville Paper & Mfg. Co., Inc.
LYNCHBURG, VA.	Caskie Paper Company, Inc.
MEMPHIS, TENN.	Southland Paper Company
MILWAUKEE, WIS.	Nackie Paper Company
MINNEAPOLIS, MINN.	The John Leslie Paper Company
	Newhouse Paper Company
MONTGOMERY, ALA.	Weaver Paper Company
NASHVILLE, TENN.	Clements Paper Company
NEWARK, N. J.	Henry Lindenmeyr & Sons
NEW HAVEN, CONN.	Carter Rice Storrs & Bement Inc.
	Henry Lindenmeyr & Sons
NEW ORLEANS, LA.	Alco Paper Company, Inc.
	Henry Lindenmeyr & Sons
	The Alling & Cory Company
	Miller & Wright Paper Co.
NEW YORK CITY	Linde-Lathrop Paper Company, Inc.
	The Canfield Paper Company
	Marquardt & Company, Inc.
	Schlosser Paper Corporation
	Zellerbach Paper Company
	Western Newspaper Union
OAKLAND, CAL.	Field Paper Company
OKLAHOMA CITY, OKLA.	D. L. Ward Company
OMAHA, NEB.	The J. L. N. Smythe Company
PHILADELPHIA, PA.	Schuylkill Paper Company
	Zellerbach Paper Company
PHOENIX, ARIZ.	The Alling & Cory Company
PITTSBURGH, PA.	C. M. Rice Paper Company
PORTLAND, MAINE	Zellerbach Paper Company
PORTLAND, ORE.	Narragansett Paper Co., Inc.
PROVIDENCE, R. I.	Carter Rice Storrs & Bement Inc.
RENO, NEV.	Zellerbach Paper Company
RICHMOND, VA.	B. W. Wilson Paper Company
ROCHESTER, N. Y.	Virginia Paper Company
SACRAMENTO, CAL.	The Alling & Cory Company
ST. LOUIS, MO.	Zellerbach Paper Company
	Beacon Paper Company
	Tobey Fine Papers, Inc.
ST. PAUL, MINN.	The John Leslie Paper Company
	Newhouse Paper Company
SALT LAKE CITY, UTAH	Zellerbach Paper Company
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SPOKANE, WASH.	Zellerbach Paper Company
SPRINGFIELD, MASS.	Carter Rice Storrs & Bement Inc.
STOCKTON, CAL.	Zellerbach Paper Company
SYRACUSE, N. Y.	The Alling & Cory Company
TACOMA, WASH.	Zellerbach Paper Company
TOLEDO, OHIO	The Commerce Paper Company
TROY, N. Y.	Troy Paper Corporation
TULSA, OKLA.	Tulsa Paper Company
WACO, TEXAS	Olmsted-Kirk Company
WASHINGTON, D. C.	Stanford Paper Company
	Virginia Paper Company
WICHITA, KAN.	Western Newspaper Union

EXPORT AND FOREIGN

TORONTO, CANADA	Buntin Reid Paper Co., Ltd.
NEW YORK CITY (Export)	20 countries in Latin America; West Indies, Philippine Islands, Hong Kong, South Africa.
NEW YORK CITY (Export)	Muller and Phipps (Asia) Ltd.
Belgian Congo, Hong Kong, Philippine Islands, South Africa.	
AUSTRALIA	B. J. Ball Limited
NEW ZEALAND	B. J. Ball (N. Z.), Ltd.
HAWAIIAN ISLANDS	Honolulu Paper Company, Ltd.



Independence Hall, Philadelphia, Pa.

Photo by Louis C. Williams

Warren's CAMEO BRILLIANT GLOSS

This insert is a lithographed demonstration of Warren's CAMEO BRILLIANT GLOSS, basis 25 x 38 - 100 (200M). CAMEO BRILLIANT GLOSS is a double-coated paper of exceptional brightness — suitable for de luxe halftone printing either by offset lithography or by letterpress. The pictures on the front and back of this insert demonstrate how effectively the paper accentuates the brightness of high-light areas and adds life to illustrations, whether in color or black-and-white.

CAMEO BRILLIANT is also available in the Dull finish and in the special finishes Saxony and Falmouth — in basis weights 70, 80, 100 and 120, and in cover and cover-bristol weights. The dull finish provides a non-glare background for pictures and type. The special finishes Saxony and Falmouth lend an embossed texture to lithographed prints.

Consult your Warren Merchant for local stocks of CAMEO BRILLIANT papers.

This demonstration was run offset from 150-line deep-etch plates, six up on a 35 x 45 press.

Write for free booklet — "How Will It Print by Offset"

S. D. WARREN COMPANY • BOSTON 1, MASS.

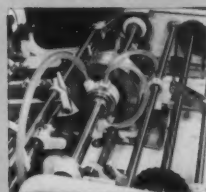
[BETTER PAPER  BETTER PRINTING]
Printing Papers

Harris 120 inker design gives superlative print quality . . . full coverage of a 14 1/8" x 20" form.

Harris 120 moisture control is the most precise ever offered in the 14x20" sheet size.

NO MATTER WHAT THE JOB...A MAN DOES HIS BEST WORK ON A HARRIS

Designed for fast makeready, fast running and fast changeovers...the Harris 14x20" is the press for those extra-profitable short run jobs. And it's a sweet press for multicolor too. Its print quality is comparable to larger Harrises...its overall design makes it the heaviest and most stable of all presses in the 14x20" size. But, above all, the Model 120 is a professional press...get the facts soon.



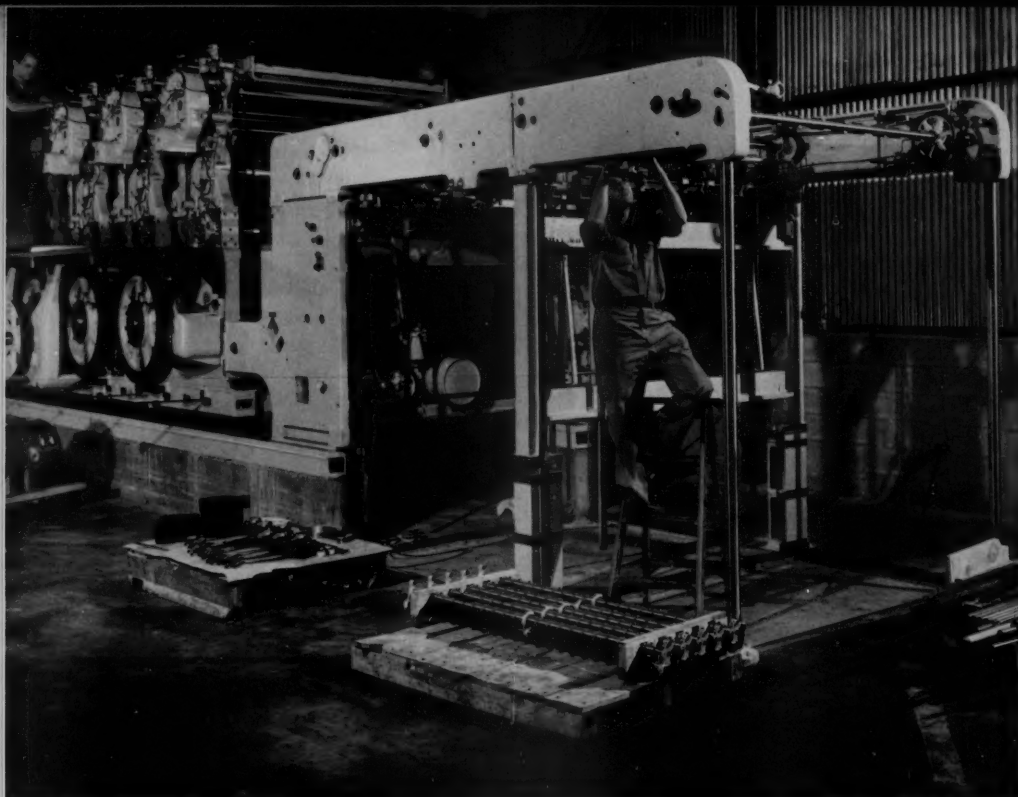
Harris 120 vacuum wheel feeder assures steady feeding of all types of stock. Make-ready and change-over on the feeder set a new high in operating ease.

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CORPORATION

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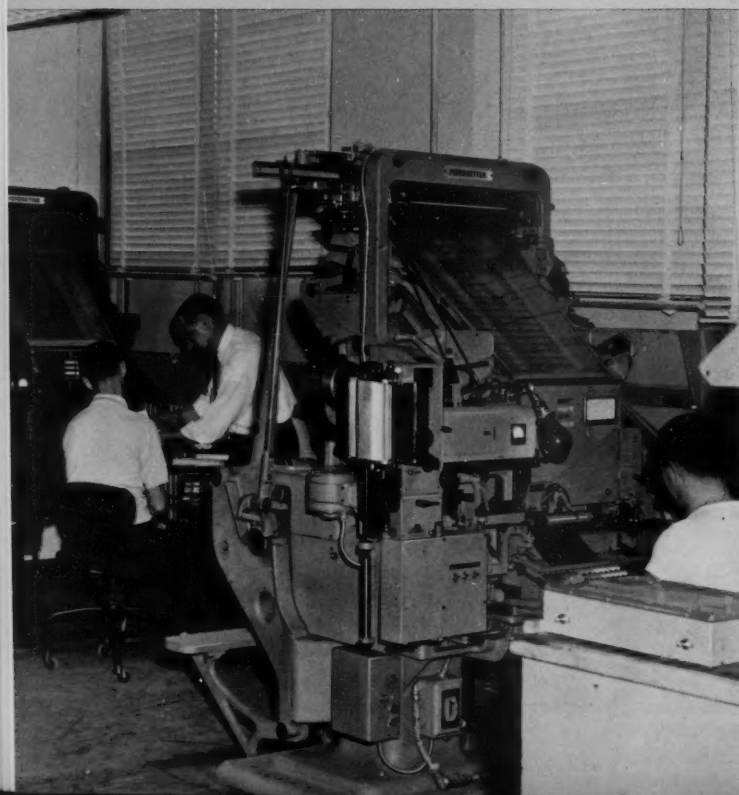
A Division of Harris-Intertype Corporation

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FOR PRINTING MULTI-COLOR cartons exclusively, this new Harris five-color, sixty-inch, double-delivery lithographic press, incorporating *Control Zone Design*, is being installed in the new Container Corporation folding carton plant at Solon, Ohio. The press is raised above the floor to extend feed and delivery piles.

What's going on at E

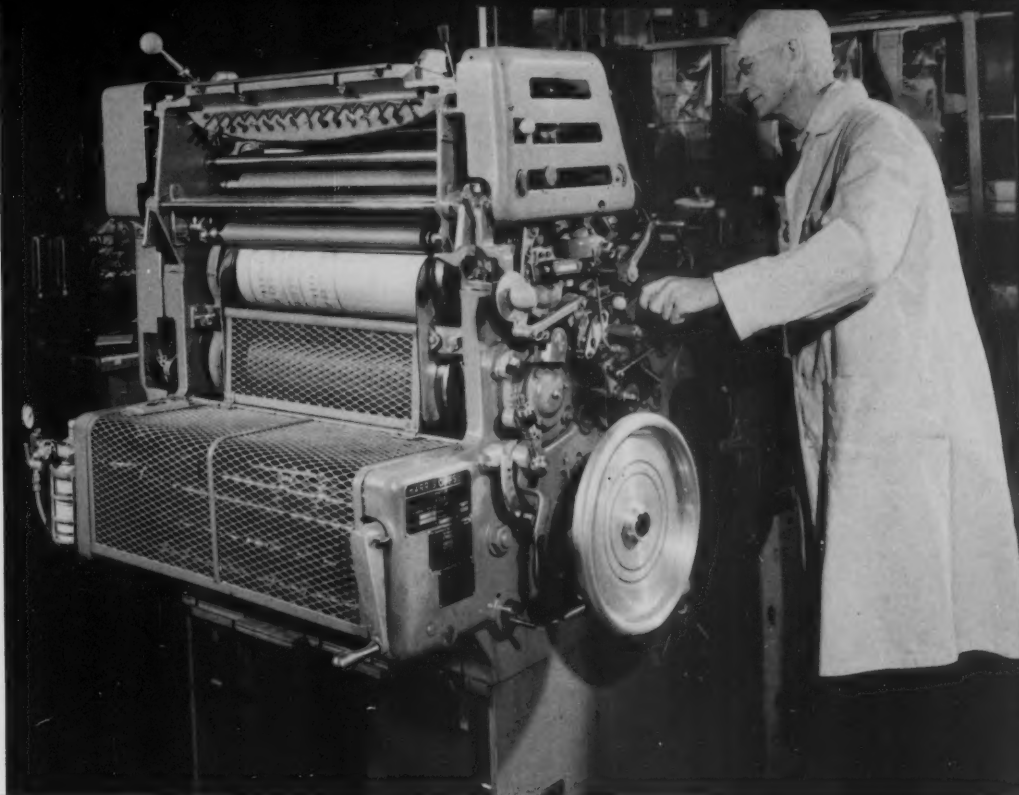


SAFETY OF SHIPS, subs and aircraft depends upon information set on these two Intertype Fotosetters at the U.S. Navy Hydrographic Office, Suitland, Md. Highly specialized type composition for charts and related navigational aids is set on film for maximum clarity and legibility. (Official U.S. Navy Photo)



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PRINTING RESEARCH is carried on not only by Harris-Intertype, but by many of its customers such as the Aluminum Company of America. Here at the Alcoa Research Laboratories in New Kensington, Pa., a technician tests and evaluates commercial inks for lithography on foil. The press is a 14" x 20" Harris.



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Harris Presses • Intertype Typesetting Machines • Cottrell Presses • Seybold Cutters • Macey Collators
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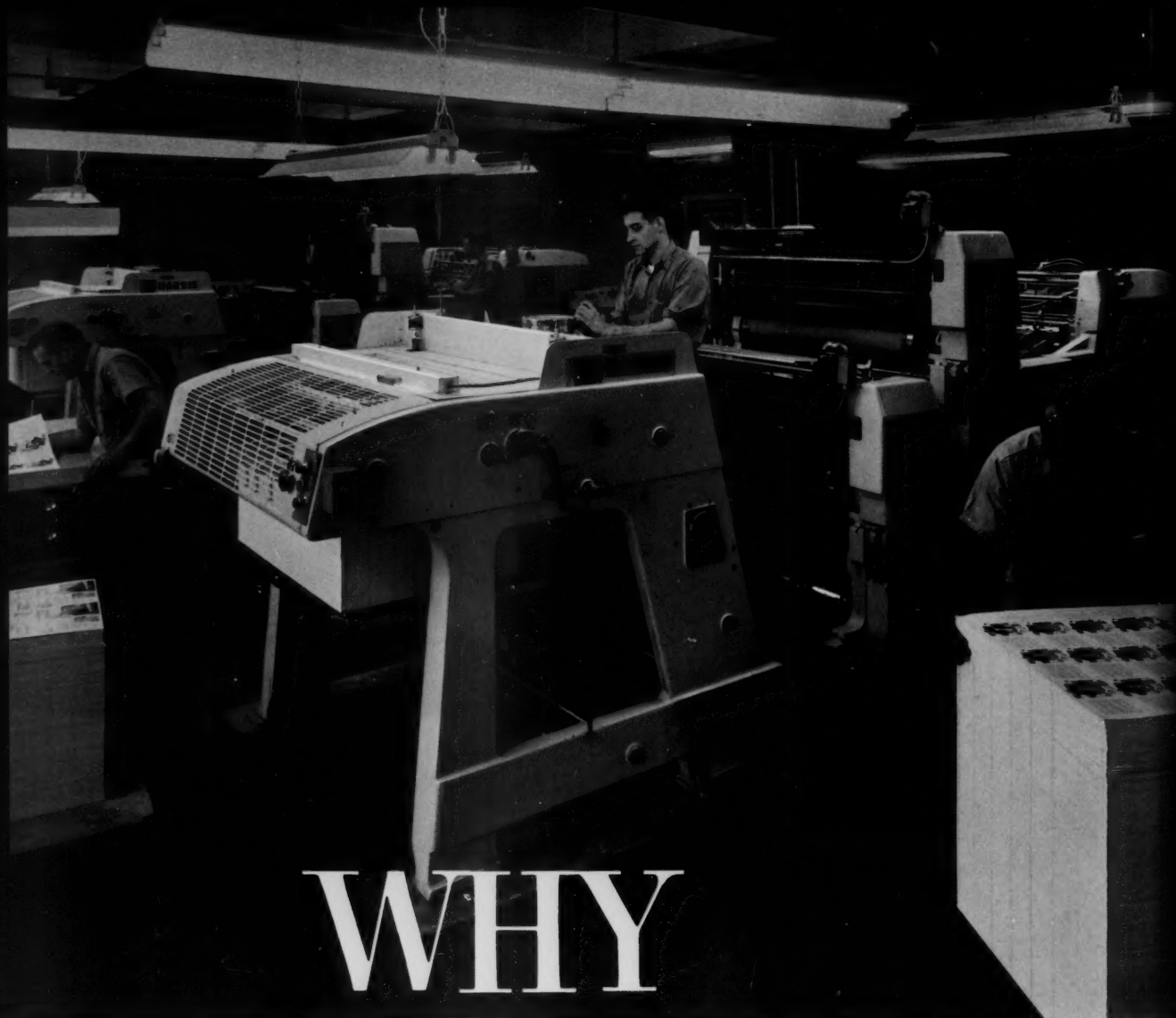


THE GATES NITE WATCH automatic programming system using the tape transport unit shown at right, and an automatic transcription changer keeps WKY Oklahoma City radio announcer Don Wallace happy. His popular show is taped at his convenience giving him more time for personal appearances.



LARGEST SENSITIZED PLATE ever made, a 58" x 77" x .020 Harris Alum-O-Lith offset plate rolls off the coating machine at the new Lithoplate plant in Covina, California. This king-size plate helps illustrate the range of new facilities now permitting production of plates to fit every offset press in use today.

PRECISION UNLIMITED... Bolometers shown on this test stand at PRD Electronics, Inc., are used for precise microwave power measurements. PRD, a leading manufacturer of microwave and other electronic instruments, serves government agencies and the communications industry.



WHY

a man does
his best work

on a Harris. Put a man on an inferior press and he loses much of his pride, most of his "try". Put him on a Harris 25" x 38" two-color, and he meets the challenge of making his own skill match the capabilities of the press. It's that simple. It's that important. Want the best? Want a press for profitable printing of a wider range of jobs? Call your Harris man for complete information and a demonstration.



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LITHO CLUB NEWS



President's Message

By Rae H. Goss

President, National Association of Litho Clubs

In my first report as NALC president, I would like to describe some of my activities since the convention in Boston in May. The chairman of the Southwest Litho Clinic invited me to attend the annual program and exhibit, held this year in Houston at the Rice Hotel. This was a very gratifying experience for me. The Litho Clubs of Dallas and Houston should be congratulated on the vision they had in starting this annual affair. This was the 10th clinic and from the enthusiasm I saw, it appears it will be pretty hard for any graphic arts group to beat their attendance.



The SWLC had a great deal to offer. First there was a trade fair which gave the supply people an opportunity to display and demonstrate their products, which turned out to be very successful. I am certain that the reports from the people who participated in the trade fair were gratifying to the Clinic officials. The educational part of the clinic was arranged in concurrent sessions so that it was possible to attend the session of greatest interest, or to move about among the various sessions. Six meetings were going on at the same time. The program made it easy to determine in advance who was talking and at what time he was to speak.



The meeting started at 8:30 a.m. and approximately every 45 minutes a new speaker took over. Each speaker was an expert in his own category. The talent was the best I have ever seen gathered together at one graphic arts meeting. The reason this group can attract such talent is that the registration was in excess of 500. Attendance at the Saturday panel was in excess of 600 and the Saturday night banquet drew 650. This certainly indicates to me, as president of NALC, that it is up to other litho clubs around the country to capitalize on the interest in such educational programs. The Dallas-Houston accomplishments over the past 10 years have done a lot in the Southwest for the lithographing industry, not only in stimulating the interest in litho club work, but in promoting the whole Southwest litho industry.



Our hats are off to all the men in the Southwest Litho Clinic; and to Houston and Dallas Litho Clubs!★

Litho Club Secretaries

ATLANTA
Bob Scheuer, 2118 Brannen Rd., SE

BALTIMORE
Robert Press

BOSTON
Vincent Aliberte, 2010 Revere Beach Pkwy, Everett

BUFFALO
John Demake

CANTON
Clayton Betz, 531 Grosvenor Dr., NW, Massillon, O.

CHICAGO
John Jachimiec, Container Corp. of America, 1301 W 35 St.

CINCINNATI
Harold Biddle, 3308 Galbraith Rd.

CLEVELAND
Raymond Gallagher

COLUMBUS
Ed Carter, 873 William St.

CONNECTICUT VALLEY
Irving Gross

DALLAS
A. G. Copeland, 3116 Commerce St.

DAYTON
Loomis Pugh, 1809 W. Columbia, Springfield, O.

DETROIT
Erhardt Toensfeldt, c/o Drake Ptg. Co., 2000 W. 8-mile Rd., Ferndale

FORT WORTH
Paul Hansen, 5317 6th Ave.

GRAND RAPIDS
Joseph Stevens

HOUSTON
Grady Caldwell, Caldwell Ptg. Co., 407 M&M Bldg.

LOS ANGELES
Al Griffin, 520 Monterey Rd., Pasadena

MILWAUKEE
Jack Miller, 2572 N. 21 St.

NEW YORK
Ed Blank, 401 8th Ave.

OKLAHOMA CITY
J. Earl Hunter, 536 NW 48 St.

PHILADELPHIA
Joe Winterburg, 618 Race St.

PIEDMONT
Mrs. Jo W. Shaw, 502 Security Bank Bldg., High Point, N. C.

ROCHESTER
Ed Potter, 198 Weston Rd.

ST. LOUIS
Ray Eckles, 7023 Radom

SHREVEPORT
Roena Bradford, PO Box 397

SOUTH FLORIDA
Ken Miller, 13451 Alexandria Ave., Opa-Locka

TULSA
Mrs. M. K. Hare, 2521 So. Birmingham Place

TWIN CITY
Fred Schultz, Buckbee Mears Co., Toni Bldg., St. Paul

WASHINGTON
Art Nugent, 1130 S. Thomas St. Arlington, Va.

CENTRAL WISCONSIN
Bill Zimmerman, Rt. 2, Box 531, Menasha

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Twin City Club Tours American Can Plant

Members of Twin City Club inspect conveyor system at American Can plant, during tour held July 7.



One hundred members of the Twin City Litho Club accepted the invitation by American Can Co. to our its St. Paul plant July 7.

The members were guided through the entire manufacturing operation, with special interest focused on the large metal decorating offset press

used by the company to print a large variety of metal containers.

At its next meeting, in August, the club plans a tour of the Northwest Paper Co. plant at Cloquet, Wis.

New members of the club are Eldon Johnson, Cyril Ostendorf, Harold Burns, John Peick and Mark Brewer.

St. Louis

Hold Stag Barbecue

The St. Louis Litho Club held a Stag "Bar-B-Q" at the Father Griffin Home Association in St. Louis County.

The affair, running from noon until break-up, was attended by 150 members of the club.

Baltimore

Annual Crab Feast Held

The Baltimore Litho Club held its Annual Crab Feast July 23 at the Baltimore County Fish and Game Protective Association, with 100 attending.

The next regular meeting of the club will be in September.

New York

Set Annual Picnic Plans

Members of the New York Litho Club have been urged to set their reservations for the club's annual beefsteak picnic, which will again be

held at Platte Deutsche Park, Franklin Park, N. Y., Sept. 17.

Reservations for the day-long affair are available from Louis J. Federamck, 41 Salem Rd., North Merrick, N. Y.

Washington

Holding Fishing Party

The Washington Litho Club will hold its 6th Annual Fishing Party Aug. 20, at Solomons Island, Md. The outing is an all-day affair, with dinner following the fishing.

Reservations are available through John J. Laverine, Bowden Graphic Arts Supply Co., 127 Kennedy St., N. W., Washington.

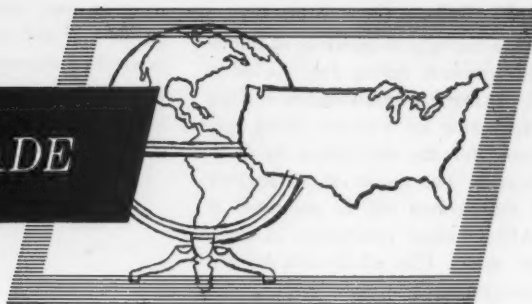
Dallas

Talks on Litho and Chemistry

Carl B. Harris, Sinclair and Valentine Co., addressed the Dallas Litho Club meeting in June on "Lithography and Chemistry." His talk indicated the intimate relationship of the chemical laws to litho produc-

(Continued on Page 98)

NEWS about the TRADE



Western Planning Stock Sale, Name Change

WESTERN Printing and Lithographing Co., Racine, has filed a registration with the Securities and Exchange Commission for the sale of 362,114 shares of its common stock. Of this amount 150,000 shares would be on the company's account and 212,114 shares would be offered by their present owners. Goldman Sachs and Co. would be principal underwriter for the sale.

The company, which is planning to change its name to Western Publishing Co., has an international operation and a reported net worth of \$41 million. It is one of the largest producers of juvenile books, games and comic books, in addition to commercial printing and lithographing and trade and school books for other publishers.

Sales for the company in 1959 were reportedly over \$92 million and earnings over \$5,500,000.

Capital from the sale of the 150,000 shares by the company will go to help finance a \$4,600,000 expansion and improvement program.

Among the stockholders planning to sell shares are several trusts and a number of the company's officers, including W. R. Wadewitz, board chairman; H. D. Spencer, vice chairman; H. M. Benstead, chairman of the executive committee, H. E. Johnson, president, and Elmer G. Voigt, a company director.

The selling shareholders own 1,042,410 of the company's 1,500,000 outstanding common shares. They also own a similar amount of the 1,500,000 Class B common shares

outstanding, none of which will be sold.

SEC action on the proposals was expected in the early part of August.

Lincoln Buys Own Building

Lincoln Letter Service and Lithograph Co., Inc., has acquired the seven story building at 35 Ninth Ave., New York.

The new 70,000 sq. ft. Lincoln Graphic Arts Building, which is being remodeled and refurbished to accommodate all of the company's facilities for direct mail advertising, will offer addressing, art, binding, copy, folding, mailings, mimeographing, multigraphing, packaging, photo offset, plate making, process letters and other direct mail ads.

The 11-year-old company's facilities include presses ranging from multiliths to 28 x 42 two-color equipment and complete camera and plate making departments.

Litho Grows on U. S. Report

The June edition of the Economic Summary of the Printing and Publishing Industry, published monthly by the Department of Commerce, indicates an increase of 12.2 per cent in sales for the industry, compared to a 5.8 per cent increase in the gross national product for the same period.

The report also shows the average weekly earnings of production workers in lithography to be \$108.11, an increase of 4.1 per cent over the same period last year. This compares to an average in the printing and pub-

lishing industry of \$104.12, an increase of 3.7 per cent.

The report shows that there now are 67,300 employees in the lithographing industry, which is an increase of 3.1 per cent.

In the section on imports and exports of books, periodicals and other printed matter, the department reports that for January and February, 1960, imports totaled \$7,100,164, compared to \$6,017,329 for the same period in 1959, an increase of 18 per cent. Exports for the same period were \$19,897,296, compared to \$19,364,194 for the previous year, an increase of 2.8 per cent.

The principal exporter of printed matter to the U. S. is the United Kingdom with \$2,350,219, to whom we export \$1,763,114. The principal importer of U. S. printed matter is Canada with \$11,010,557, from whom we import \$538,447.

Schoenberg Printing Sold

Oliver Emerson and Robert Wing have purchased Schonberg Printing Co. of Cleveland. The new name of the company is Emerson Press, Inc.

Mr. Emerson, president and treasurer of the company, had been sales manager for Tower Press since 1952. Mr. Wing, sales manager, had been a salesman for Buehler Printing Corp. and Steingass Lithograph Inc.

The printing plant contains 9,000 square feet of space and has been modernized in the last four years. Primary business of the company is offset.

Schonberg Printing had been operated as a family business since 1912, when it was founded by David Schonberg. Mr. Schonberg will serve the new organization as a consultant.

NAPL Making Growth Survey

The National Association of Photo-Lithographers during July mailed to all members a questionnaire seeking information for a survey being conducted for the association by C. J. Minnich. The results of an analysis of the answers will be presented at NAPL's annual convention in October, as "A Plan of Growth for the Lithographer."

The association reports that all answers on the questionnaires will be kept strictly confidential and only the net results of all questions will be reported.

The questionnaire is divided into four major categories. They are: "What is your sales picture?; How do you manage the functions of business?; What kind and size of plant do you operate? and What is your financial picture?"

Some of the specific questions on the form are: "What were annual sales 1959?; What types of work did you sell and what was the percentage of each?; What kind of sales training program do you have?; Who runs the sales department?; Who runs plant operations?; Who prepares estimates?; How much and what kind of equipment do you have?; How do you control production?; How do you handle quality control?; How do you keep records of costs?; What was the net worth of your business at the end of 1959? and Who owns your business?"

Grants First Printing M.S.

A milestone in graphic arts education was reportedly reached Aug. 5 with the conferral of the first Master of Science degree in Printing Management.

Receiving the degree at South Dakota State College in Brookings was Donald N. Rollo, a native of Johnson City, N. Y. Mr. Rollo had received a B.S. degree in Printing Management at Rochester Institute of Technology in 1957.

The graduate program in Printing Management at South Dakota State, which got underway in the fall of 1959, is reportedly the first of its kind in the country. Students in the

program may select an area of emphasis that will train them for plant production management, education in the graphic arts, product research or

Donald N.
Rollo



sales management. Rollo's program was aimed at sales and management.

During the 1959-60 school year Mr. Rollo held a graduate assistantship in the Department of Printing and Journalism, with duties in production, research and training. His thesis, completed in partial fulfillment of the requirements for the M.S., is entitled "An Investigation of Production Control Systems and Methods Used in Selected Small Commercial Printing Plants."

Hammer of Forbes Dies

George Hammer, 55, until recently supervisor of technical services for Forbes Lithograph Mfg. Co., Boston, died late in June, after an operation for a heart ailment. He had suffered from the ailment for some time before the operation.

Mr. Hammer had been with the company for 37 years, having joined it in June 1923. He was a prominent member of the Technical Association of the Graphic Arts and the Research Committee of LTF.

Mr. Hammer enjoyed a reputation in the industry, as an expert on tech-

George Hammer



nical problems, particularly in the field of quality control.

Donohue Joins Archer

Anchor Chemical Co., Brooklyn, has appointed James Donohue as sales service manager.

Mr. Donohue was associated with Inter-Chemical Corp., Printing Ink Division, for twenty years.

Folding Box Value Increased

Shipments of folding cartons during the first half of 1960 had a dollar value of 469.6 million, compared with 459.6 million during the first half of 1959. Tonnage, however, as announced by the Folding Paper Box Association of America, dropped to 1,160,100 from 1,163,600 tons shipped during the first half of 1959.

June shipments this year were 1.2 percent ahead of the same month last year but 1 percent behind in tonnage. Second quarter shipments for 1960 were ahead of the first quarter by 1.1 percent in dollar value and five-tenths of 1 percent in tonnage. This was 1 percent in dollar value greater than second quarter value in 1959.

New orders for folding cartons during the second quarter of 1960, the association said, declined 4.2 percent in dollar value and 4.0 percent in tonnage for the first 1960 quarter.

U. S. Advances Gage

James A. Gage has been named West Coast sales manager for the U. S. Printing & Lithograph Division, Diamond National Corp., New York.

Mr. Gage joined U. S. Printing and Lithograph in 1949 as a sales representative in the Wisconsin area. He was named assistant sales manager for the Midwestern region in 1958.

Ross-Gould Elects Jacques

Edward C. Jacques, was elected vice president of Ross-Gould Co. He has been with the company for 20 years.

1960 is the company's 52nd year in business, as an all offset house.

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lastingly **bright**.

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difference!

We've made it easy for you to compare the uniformity, texture and brightness of this Rising Winsted Glo-Brite sheet with any other bright white paper.

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is the ideal sheet for reproducing sparkling detail in halftones... sharp, clear definition in type areas... crisp overall aliveness... by steel engraving, offset, gravure, letterpress, thermographic, photo gelatin and copper plate processes... and as you also see, perfect for embossing. In addition to its outstanding printing qualities, this warm white paper affords good opacity, superior folding properties and excellent bulk-for-weight.

Available Through Your Paper Merchant
in the Following Sheet Sizes and Weights:

Vellum Finish

Sub. Basis 17 x 22	24	28	32	36	40
22 x 34	96M	112M	128M	144M	160M
Text Basis 25 x 38			60	70	80
23 x 29			84M	98M	112M
23 x 35			102M	118M	—
25 x 38			120M	140M	160M
35 x 45			198M	232M	—
38 x 50			—	280M	—

Cover Basis 20 x 26	50	65	80
20 x 26	100M	130M	160M
23 x 35	155M	201M	248M
26 x 40	200M	260M	320M
35 x 46	310M	402M	496M

Bristol Basis 22 x 34	2/56	3/56	2/64	3/64
22 x 34	224M	336M	256M	384M

Bristol Basis 22½ x 28½	2/50	2/60	2/70
22½ x 28½	200M	240M	280M

Thin Plate Finish

Bristol Basis 22½ x 28½	165M	(2/82½)
Plate, Medium Plate, Calender Plate, Calender Medium Plate, Linen Finishes		
Bristol Basis 22½ x 28½	200M	(2/50)
22½ x 28½	240M	(2/60)

Second Figure Denotes Grain Direction
(Send for Price and Line Data)

Official converters of Winsted Glo-Brite: The William-house, Inc. for Envelopes, Weddings and Announcements; and Ideal Cards, Inc. and Otten Bros. Co., Inc. for Cut Cards. Samples illustrating the fine work of each of these houses will be sent on request.

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80 lb. Cover



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is the ideal sheet for reproducing sparkling detail in halftones... sharp, clear definition in type areas... crisp overall aliveness... by steel engraving, offset, gravure, letterpress, thermographic, photo gelatin and copper plate processes... and as you also see, perfect for embossing. In addition to its outstanding printing qualities, this warm white paper affords good opacity, superior folding properties and excellent bulk-for-weight.

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Bristol Basis 22 x 34	2/56	3/56	2/64	3/64
22 x 34	224M	336M	256M	384M

Bristol Basis 22½ x 28½	2/50	2/60	2/70
22½ x 28½	200M	240M	280M

Thin Plate Finish

Bristol Basis 22½ x 28½	165M	(2/82½)
Plate, Medium Plate, Calender Plate, Calender Medium Plate, Linen Finishes		
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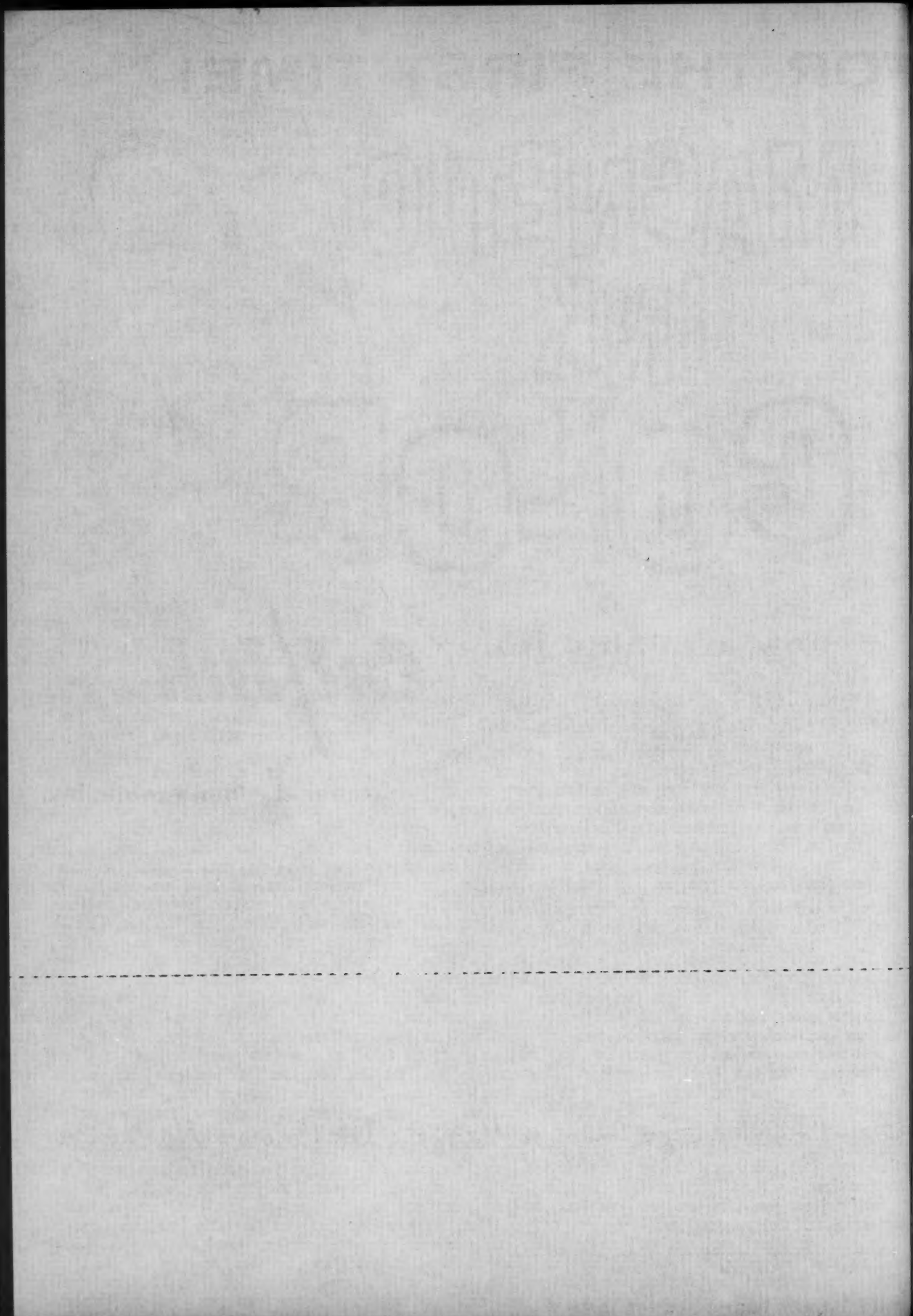
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LPNA Defends Higher Tariffs at Hearings

THE Lithographers and Printers National Association, through its executive director Oscar Whitehouse, has taken a strong stand, at hearings held July 26 in Washington, against any reduction in tariff rates on a wide range of lithographed and printed imports.

Mr. Whitehouse, who presented briefs on the import situation on June 24, appeared before the U. S. Tariff Commission and the Committee for Reciprocity Information to argue the industry's case. Both tariff groups are conducting investigations under the "peril point" provision of present tariff legislation prior to the U. S. negotiating new tariff schedules with other members of the General Agreement on Tariffs and Trade in Geneva.

"The growth of foreign competition in the last three years," said Mr. Whitehouse, "has been large and will continue to grow under the present disparity in wage rates and low import duties." In concluding his analysis of the import situation, he said "it should be clear that the peril point of duty rates on imported materials has been passed; that the rate of growth of imports across the whole line of products is serious, and as the percentage of the total market represented by imports increases, relief will have to be sought in the form of higher duties.

"The current trend is more than alarming; it is serious and threatens the stability, the continuity of business operation, as well as the employment of many people, in one of the oldest traditionally small business manufacturing industries in the United States."

The brief points out that U. S. lithographers have no advantages over their foreign competitors by reason of mass production or photographic or mechanical equipment not available abroad, and as a matter of fact are at a distinct disadvantage because of the high cost of skilled labor which figures so importantly in the final product cost.

"The comparatively low foreign wages enable the producing companies abroad to enjoy a striking advantage over the U. S. industry where lithographic artisans are among the most highly paid of any American skilled workers," the brief states. "Every pound of lithographic merchandise (imported), therefore, means a loss of opportunity to the highly skilled employees in the U. S. industry, and not merely a reduced volume of business and possible profits to their employers."

A comparative table of the average earnings of production workers here and abroad presented at the hearings shows U. S. workers receiving \$2.57 per hour; Belgium, \$.58 per hour; France, \$.60; Holland, \$.45; Italy, \$.435; West Germany, \$.583. Direct wages excluding so-called fringe benefits range from approximately 15% to 25% of direct wages in the U. S., according to the association.

"It is no wonder that lithographic imports have been growing steadily and rapidly over the last few years," the report continues, "even though the reductions in duty rates in reciprocal trade agreement negotiations have been of a limited extent. In other words, even the present duty rates are no impediment to increased shipments from abroad. Therefore, the peril point has been passed.

"This growth, when measured by the record of the import statistics from U. S. agencies, indicates an increase of 113% in 1959 over 1955, with 1958 showing a 29% growth over 1957 and 1959 showing a still larger percentage growth of 32% over 1958," according to the brief.

According to the report, ratios for the lithographic and printing industry in the United States indicate that 25% of the sales dollar goes to pay the wages of labor. Added to this 25% is the cost of sales salaries and administrative wages and salaries which approximate 8%. Therefore, 33% of the sales dollar goes to pay wages and salaries. Comparing this with the foreign wage data the brief

concludes that the result is a competitive situation wherein foreign countries can manufacture and deliver in the United States lithographed and printed materials between 40% and 60% below U. S. prices.

The report also discussed the effect of existing low duty rates on lithographic prints, labels and flaps chiefly applicable for use in the tobacco industry; decalcomanias in ceramic colors; children's books, post cards, greeting cards and playing cards.

Two ALA Locals Settle

Pittsburgh lithographers and the ALA have settled on a new contract which is in effect from May 1, 1960, to April 30, 1962.

Western Printing and Lithographing Co., Racine, Wis., and Local 54 of the ALA have also reached agreement on a new contract, effective March 1, 1960, to Dec. 31, 1962.

The Pittsburgh contract calls for a wage increase of five dollars a week for all classifications above second helper and four dollars a week for all those below second helper; three weeks vacation after one year service; and an additional health and welfare contribution of 70 cents a week per employee. All items are effective May 1, 1960. Effective May 1, 1961, the contract stipulates a five dollar a week increase for all classifications above second helper and four dollars a week for all below; and an additional contribution to health and welfare of 50 cents per week per employee.

The Western contract provides a 15 cent cost of living increase added to the basic wage rates; 15 cent increase to all except general workers; 13 cent increase to general workers; on Jan. 1, 1961, a 15 cent increase to all except general workers and 13 cents to general workers; on Jan. 1, 1962, a 13 cent increase to all except general workers and 12 cents to general workers; employees who work a half day shift on the last work day preceding Christmas and New Years days will be paid a full shift's wages.

Seasons
Greetings

How to make a good impression on a date



The calendar business calls for true-to-life colors. That's why the printer of this striking new 1961 calendar specified West Virginia Pinnacle Offset.

Pinnacle is a bright blue-white paper giving the truest color rendition possible and assuring sharp detail. Stiffness of stock for this book-type calendar means durability for the year, while soft, pleasing texture adds to the beauty of the finished piece.

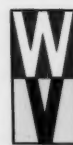
And West Virginia's stabilized moisture control makes precise register easier to maintain. Opacity is excellent, of course.

Whatever your printing needs, West Virginia's coated and uncoated letterpress and offset papers assure smooth, trouble-free press runs, fine line reproduction and brilliant process work.

Ask also about our direct mill-to-you sales policy and technical service. Write West Virginia Pulp and Paper Company, 230 Park Ave., New York 17, N. Y., or get in touch with one of the offices listed.

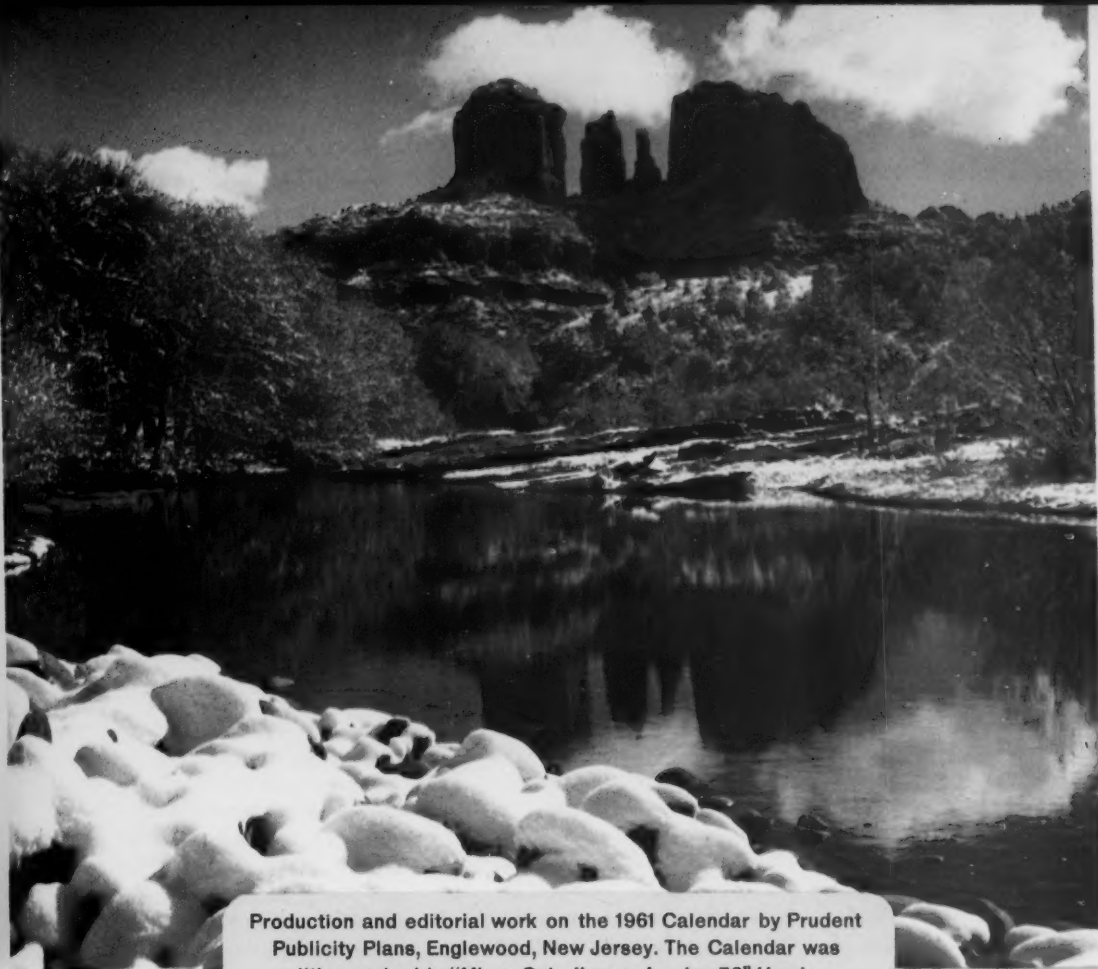
Fine Papers Division
Commercial Printing Paper Sales

Chicago 1 / FR 2-7620
Cincinnati 12 / RE 1-6350
Detroit 35 / DI 1-5522
New York 17 / MU 6-8400
Philadelphia 7 / LO 8-3680
Pittsburgh 19 / CO 1-6660
San Francisco 5 / GA 1-5104



West Virginia
Pulp and Paper

THIS INSERT IS LITHOGRAPHED ON PINNACLE OFFSET, BLUE-WHITE, REGULAR FINISH, 100#.



Production and editorial work on the 1961 Calendar by Prudent Publicity Plans, Englewood, New Jersey. The Calendar was lithographed in "Micro-Color" on a 4-color 76" Harris Offset press by the W. A. Krueger Co., Brookfield, Wisconsin, on 100 lb. Pinnacle Offset Blue-White, Regular Finish.

AFTER THE STORM

BOB BRADSHAW

1961

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Japanese Photo-Composing Machine Shown at Chicago

PRINTERS who visited the Japanese national exhibit at the International Trade Fair held in Chicago during June, had opportunity to examine a machine which, it was claimed, "can compose the language of any country in the world without the use of a single piece of type." Samples were available of work done in the Japanese, Chinese, Siamese, Burmese, Korean and Greek languages which appeared to substantiate this claim. However, demonstrations at the fair, naturally, concentrated on use of the machine for handling printed work in English.

As explained by Kiyoshi Ishii, representative of the Tokyo manufacturer, the alphabet with numerals and all needed characters is inscribed on a transparent plastic master plate. This is inserted, horizontally, under a lens through which each character is photographed onto either a film or photo-sensitive strip of paper. After development, this reproduction copy is utilized in procedures for let-

terpress, gravure or offset printing. By manipulating attachments type sizes up to 50 points are available, while other variations in style, faces and other details up to 200 in number are possible from the one master plate, according to Mr. Ishii.

The device, bearing the name "Sha-Ken type photo composing machine" is manufactured by K. K. Shashin Shokujiki Kenkyosho (Photo Composing Machine Institute Co., Ltd.) of Tokyo, according to Mr. Ishii. Since its invention some five years ago, about 1,000 machines have been installed in Japanese printing plants, he said. "Three or four" he also stated, are in use in the U. S. including "one in the Library of Congress, Washington, D. C."

Floor space required is about equal to that for an office typewriter desk. Among products for which the "Sha-Ken" is suitable, he mentioned straight matter for books, ruled forms, show cards, menu cards, transportation time cards, price lists, etc.

Color Vision Tests Urged

The Education Council of the Graphic Arts Industry announced, last month, that it has available the Inter-Society Color Council Aptitude Test for use on a loan basis by members.

The aim of the test is to produce an exacting measure of the color skill—actual and potential—of people whose jobs require them to make accurate and rapid judgments of color matching. It can be utilized in evaluating employees for their color aptitude; advancement in color work; and as a check on employees engaged in color work to determine skill in color perception.

The test kit consists of an easel with fixed color chips, corresponding loose chips in a dispenser, scoring sheets, scoring key, a Macbeth light, instructions to the test supervisor and instructions to the test candidates.

The kit may be borrowed from the council for \$15.00 for one week, plus

insured shipping costs from and to Washington, D. C.

The council points out that, according to the National Bureau of Standards, two million Americans suffer from hereditary color-deficient vision. Some optometrists believe, the council reports, that the estimate should be 7,500,000, with perhaps 1,500,000 unaware there are colors they have never seen!

PIA-LA Plan Courses

Six specialized industry classes have been scheduled by Printing Industries Association, Inc., Los Angeles, to begin the week of Sept. 19.

Courses offered include: Basic Estimating, Advanced Estimating, Sales, PIA's new Business Management Course, Management of Printing Production, and Foreman-Management Relations.

Classes will meet one evening a week and last from 8 to 13 weeks.

PIA Education Committee's Certificate will be awarded students satisfactorily completing the courses.

Further information and enrollment blanks may be obtained from Peter Benterud, PIA-LA, 1434 W. 12th St., Los Angeles.

Newspaper Union Urges Merger

THE American Newspaper Guild, AFL-CIO, at its recent annual convention in Chicago adopted, by unanimous vote, a resolution empowering its officials to continue to explore possibilities for the merger of all printing trade unions into one organization and to report on a plan of action at the 1961 meeting.

This action was taken after a talk by Elmer Brown, president of the AFL-CIO International Typographic Union, in which he declared, "We (unions in the printing industry) are down to the alternative of amalgamation or annihilation." Mr. Brown cited "the growing power of a few owners in the communications field and the combinations of employers dominating, newspapers, radio, television and magazine publication."

"The obvious need of the Newspaper Guild and all other organizations of employees in the printing and publishing industry," Mr. Brown continued, "is to find a way to unity and formation of an organization large enough, strong enough and intelligent enough to fight back."

Among unions he mentioned as potential members of his proposed all-inclusive organization, in addition to the ITU and the Guild, Mr. Brown listed the Amalgamated Lithographers of America, the pressmen's union, and those of the stereotypers and electrotypers, photoengravers, book binders, pulp, sulphite and paper makers and paper products manufacturing. He recalled that the ITU was once an "industrial type" union from which several crafts broke off as separate organizations.

In his proposed single organization he suggested the various crafts would be assigned to departments. The plan, he declared, "would stop the various crafts from 'legally scabbing' on each other."

GAIA Manager Hits Canadian Import Policy

CANADA'S small population supports a greater volume of imported printing than any other country in the world, according to David Maclellan, general manager of the Graphic Arts Industries Association, Toronto.

Imports, including publications, amounted to more than \$100,000,000 a year, said Mr. Maclellan. Much of this total was specifically produced for Canadian consumption and should have been printed in Canada, according to Mr. Maclellan.

One of Canada's biggest insurance companies has imported paper from the United States to print its annual report in its private plant, said the Graphic Arts Industries executive. The paper was cleared through customs as "samples," although it was paper for use in large quantity. This indicated how a big company will stoop to take business away from Canadian printers, Mr. Maclellan said. It also indicated, he said, how delinquent the federal government was in challenging importations affecting the industry.

He pointed out that the Marking Act requires all imported printed matter to be clearly marked with the country of origin. However, much of sales literature enters through the mail and so evades customs enforcement.

While increasing the postage rates and restrictions upon mailing pieces printed and posted in Canada, reports Mr. Maclellan, the Canadian Post Office each year carries a vast and mounting volume of third class mail in printed form postage-free, duty-free, and tax-free at the expense of Canadian taxpayers and Canadian users of postal services.

The federal government and some provincial governments continue to increase their own printing facilities and the volume of their own printing, he said.

According to Mr. Maclellan, commercial value of internal printing production by the federal government

printing bureau has passed the \$13,000,000 mark, while value of printing ordered from taxpaying industries has fallen to roughly \$5,500,000.

European countries are shipping more printing to Canada and soliciting Canadian commercial work, he said, while a leading Japanese printing magazine has urged Japanese printers to exploit the North American market.

Haynes Advances Kratz

Henry B. Kratz, Jr., has been named executive vice president of the Haynes Lithograph Co., Rockville, Md. Formerly vice president in charge of sales, Mr. Kratz will continue as general sales manager with the added duties of executive vice president.

Future sales and manufacturing expansion plans are the reasons given for the new appointment. Mr. Kratz will report directly to the president and the board of directors.

Rand-McNally Plan Space Maps

The day is coming, declares Dr. Carl H. Mapes, chief map editor for Rand McNally & Co., when maps will be available which chart the most convenient course to the moon. Meanwhile, he confessed, in a recent Chicago newspaper interview, the Skokie, Ill. firm is running into trouble getting the accurate data it insists on for drafting up-to-date maps of Iron Curtain countries.

Usually reliable information can be obtained from governmental sources. But Iron Curtain nations, he said, refuse to disclose all the details asked for by his cartographic staff of some 140 persons. Quarrels over boundaries often leave precise locations of a nation in doubt.

Discussing future developments in the map making business, Dr. Mapes declared that "the sky's the limit." "We don't know yet what mapping problems the explorations in space

will cause," he said. "Globes and maps delineating the heavens generally and the paths of the satellites in the planetary system are a future possibility."

Last year, Dr. Mapes said, the company produced the first globe showing the course of the man-made moons. There's a new demand, too, for globes to show travellers how to get from say, Chicago to Paris, by flying over the polar regions, thus avoiding the curvature of the earth's surface, and lopping off distance and time.

Among other new products he also mentioned maps that show flyway routes which birds follow in their spring and fall migrations north and south.

B & B Advances Forrester

W. T. Forrester has been advanced from director of sales promotion to vice president and director of that division by Brown & Bigelow, St. Paul, a division of Standard Packaging Corp.

Mr. Forrester has served as manager of the firm's Miami district sales office and assistant to the general sales manager before being made director of sales promotion last March. He is in charge of customer sales promotion programs of the company's 1,000-man sales force.

Gleason Joins Lindenmeyer Sons

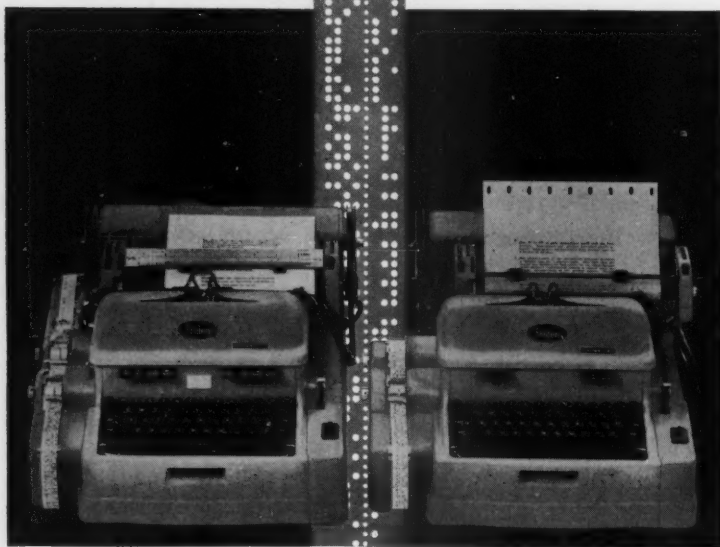
William P. Gleason, a representative of the Colonial Press, Clinton, Mass., has joined the Book Publishers Department of Henry Lindenmeyer & Sons. Mr. Gleason will be directly associated with Elmer E. Cole and David H. Cole, and will make his headquarters at the company's home office in Long Island City, N. Y.

He is a past president of the New York Club of Printing House Craftsmen and the Navigators, and served as an officer of the American Institute of Graphic Arts. He is also a member of the Type Directors, the Typophiles, Printing Estimators and Production Men's Club, and of the Task Committee of Printing Week in New York since its inception.

JUSTOWRITER® CUTS PRINTING COSTS

Any typist becomes a skilled typesetter when she uses a Friden Justowriter. She types copy on Unit 1 (The Recorder) which produces this visual check and a punched paper tape. The rest of the job is automatic.

The Reproducer, Unit 2, then reads the tape and sets type in your choice of 14 attractive faces and sizes, one of which you are now reading. Margins are automatically justified. Costs are far less than for metal composition.



The Justowriter can save you money in producing manuals, price lists, bulletins, house organs, booklets, and catalogs. For full details about this Tape-Talk machine call your local Friden man, or write on your letterhead for more information.

Equipment like this is the first step to PractiMation... Automation so hand-in-hand with practicality there can be no other word for it!



Friden

FRIDEN, INC., SAN LEANDRO, CALIFORNIA. SALES, INSTRUCTION, SERVICE THROUGHOUT U.S. AND WORLD

NSC Meeting Plans Announced

The annual meeting of the National Safety Council's printing and publishing section will be held Tuesday, Oct. 18, at the Conrad Hilton Hotel in Chicago. Morning and afternoon sessions are scheduled, according to D. H. Grothaus, general chairman of the section and safety director, McCall Corp., Dayton, Ohio. A banquet for committee members will also be staged on the preceding evening, Monday, Oct. 17.

The first session on the morning of Oct. 18 has been arranged especially for national, regional and local graphic arts organizations that are being enlisted in the drive to obtain cooperation with the section. Discussions will center on the most effective methods for promoting, establishing and administering accident prevention programs in the various groups.

At the afternoon session that same day special attention will be given to safety problems of newspaper, book and magazine publishers. There will be a panel discussion with audience participation. Details of the program will be made public later.

Schmidt Expanding Equipment

E. F. Schmidt Co., Milwaukee, has announced plans to spend \$500,000 this year for equipment to expand its sales capacity 25 per cent.

The expansion program will include purchase of a 77" offset press and complementary equipment in the bindery and platemaking departments. The company's largest press now in operation is a 58" model.

No additional plant space will be built to house the new equipment. The company plans to have the new facilities in operation by the end of the year.

Litho-Advertising Firm Formed

A new firm, Halper-Meyer-Diehl Enterprises, handling advertising, lithography and photography, has been formed in Minneapolis.

The company, at 2530 Inglewood Ave., is a partnership of Barry Halper, Minneapolis, and William Meyer and William Diehl, St. Paul.

James Gray Elects Ward

The board of directors of James Gray, Inc., New York direct mail firm, has elected H. Leslie Ward as chairman of the board.

Mr. Ward joined the company in 1932 when it established its initial



H. Leslie Ward

offset facilities. He will continue to serve in his current post as treasurer.

The company has also announced the election of W. MacF. Beresford as president. Mr. Beresford, with the company since 1923, has most recently been executive vice president and general sales manager.

He serves as a member of the governing body of the Direct Mail Advertising Assn.

Proposed Sale Falls Through

The proposed acquisition by Maclean-Hunter Publishing Co. of control of Rolph-Clark-Stone, Ltd., by purchase of shares "will not take place," the companies announced in July. The proposed sale had been announced in June.

The joint statement by Floyd S. Chalmers, president of Maclean-Hunter, and F. G. Rolph, president of Rolph-Clark-Stone, graphic arts firm, said that "Rolph-Clark-Stone operations will continue under the same ownership and management as before."

Sun Opens New Ohio Plant

The first of seven new plants of the General Printing Ink Division of Sun Chemical Corp., New York, was

opened recently in Cincinnati, Ohio, when company and plant officials were hosts for a plant inspection.

The new plant, of brick and concrete block construction, contains 14,000 square feet of floor space, and its offices and laboratory are air conditioned. The plant manufactures letterpress, lithographic and flexographic inks for printing plants in southwestern Ohio and adjacent states.

Dupont Advances Three

Victor M. Salter has been appointed assistant manager for graphic arts products in the Du Pont photo products department, succeeding Dr. William H. Vinton, who has been transferred to the company's International Department as a member of the patent and licensing section.

Named to succeed Mr. Salter as assistant manager for engineering reproduction products is David P. Hurley, formerly photo products field sales manager in New York.

Mr. Salter has held positions in both the research and sales divisions of the photo products department since joining Du Pont in 1947.

Mr. Hurley, who has been with Du Pont since 1941, has had X-ray sales assignments in several photo products districts and more recently has been responsible for trade and industrial products sales in New York.

Dr. Vinton started with Du Pont in 1943 as a research chemist and later held positions in production and sales in the photo products department.

Rejoins Book Production

Walter Kubilius, who for the past three years has been public relations director for ATF, has rejoined *Book Production* magazine, as its editor. He had been research editor of the magazine for 14 years before joining ATF.

He has been an active participant in trade association affairs and a speaker to industry groups. He has had experience with both domestic and foreign manufacturing techniques.

McKinney Joins Rosotti

Rosotti Lithograph Corp., North Bergen, N. J., has appointed H. David McKinney as marketing manager.

Most recently he has acted as a graphic arts consultant and technical writer. He was Assistant Professor of



H. David McKinney

Printing Management at Carnegie Institute of Technology for two years until 1957.

Earlier, Mr. McKinney was sales promotion manager for the Lithographic Technical Foundation, and for a time owned and operated his own sales promotion service.

He is a professional member of the Lithographic Technical Foundation and has been active in the Centurions, a program for underprivileged youth in Greater New York.

IPPAU to Meet in N. Y.

The 37th convention of the International Printing Pressmen and Assistants' Union will be held in New York City, September 26-30, 1960.

Headquarters will be in Hotel New Yorker; business sessions in Manhattan Center.

Doerfer Named Litho-Graphic VP

Richard N. Doerfer has been named vice president of Litho-Graphic Corp., Milwaukee. He is a graduate of Marquette University and current president of the Graphic Arts Young Executives Association of Milwaukee. He has been working in the graphic arts for 10 years.

Recorder-Sunset Press Creates Business Makers



A few of the three-dimensional, self-propelled, point-of-purchase displays created by Recorder-Sunset Press.

A SELF-PROMOTION piece so effective that it sold itself, is the result of an idea born three years ago in the creative art department of the Recorder-Sunset Press, San Francisco. The idea was for a Christmas card that would be a display — a natural for a firm that lithographs a good volume of point-of-sale display material. The Christmas card that evolved was a decorative tree that sprang into three-dimensional shape when the recipient pulled it from the envelope. Recipients were delighted.

One immediate result was an order from an advertising agency for a similar dimensional card to go to supermarkets to promote a "Del Monte Garden Show" promotion for California Packing Corp. This was in the form of a garden cart which, like the Christmas tree, folded flat but was snapped into shape by rubber bands inside it.

Other calls for dimensional mailers have followed. Ampex Instrumentation, which makes electronic sound components, ordered a display stand replica for a convention of electronics specialists; H. N. Berman & Co. ordered a replica of a whiskey case.

Meanwhile the department dreamed up another self-promotion piece, a "pop-up." It heralded the arrival of spring and suggested to art directors that Sunset-Recorder could do their work while they themselves went out to the golf course. A cut-out bird on a spring wire popped up out of the folder as the art director pulled it from the envelope. As a direct result, Glenmore Distilleries had the company create a salute to the liquor dealers of the new state of Alaska,

with a bottle of whiskey which popped up.

A by-product of the idea is a dimensional table piece created for Hills Brothers Coffee, Inc., for use at Disneyland. It folds into a little house that fits over a pound bag of coffee, and unfolds into a menu.

Myron Wacholder, vice president and sales manager of Sunset-Recorder, believes that these animated mailing pieces have caught on because they have showmanship. Showmanship is, he says, valuable in these days when people are deluged with a great volume of advertising mail. The advertiser, Mr. Wacholder feels, gets his money's worth out of a direct mail campaign that creates a little surprise in the recipient.

Sunset-Recorder, a diversified organization that turns out daily newspapers as well as books and advertising materials, lithographs most of the animated mailers. Since they can be relatively expensive to create in the first place, most users plan large mailings of them, and lithography turns out to be the preferred process. Die cutting is necessary for almost all of the pieces, and embossing for some. All involve a fairly large

amount of hand work in the bindery, since no machines exist for inserting the wires and rubber bands, and the pieces must be carefully inserted in the envelopes.

All mailing is handled by the company. This is particularly important in the case of the pieces involving rubber bands, Mr. Wacholder reports. They must be mailed quickly after assembling to ensure that enough life is left in the rubber bands when received to make the card come to life in the hands of the recipient.

Hansen Named Service Manager

Martin S. Hansen has been named midwest region service manager of the Miehle Co., Division of Miehle-Goss-Dexter, Inc. He will make his headquarters at the firm's general offices and plant, 2011 Hastings St., Chicago.

In his new position, Mr. Hansen will be responsible for the erection and servicing of all equipment sold by the company in Minnesota, Wisconsin, Illinois, Indiana, Ohio, Michigan, Kentucky, Missouri, Oklahoma, Iowa, Arkansas, Louisiana, Texas, eastern Nebraska and eastern Kansas.

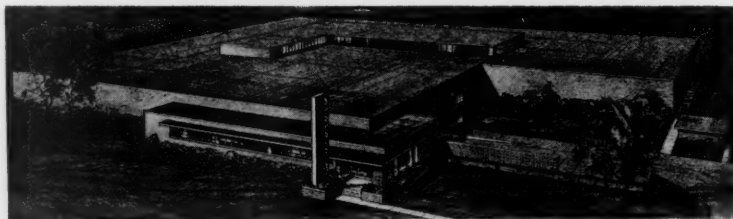
Roller Press at New Site

Roller Press, San Francisco, moved into its own building at 2860 16th St. effective July 6.

At the same time, the operations of Portal Press, which has been owned by Roller for the past ten years, were consolidated in the new building. The name of Portal Press will be discontinued and all its operations will be conducted under the name of Roller Press.

Di-Noc Building New Plant in Honeoye, N. Y.

Artist's conception of the new Di-Noc Chemical Arts plant being constructed in Honeoye, N. Y. The plant, specializing in the manufacture of graphic arts films, will also house the sales offices of the company's photographic division.



S. W. Litho Clinic Largest Yet Held



Part of the panel of 13 (top) who presented talks at the 10th Annual Southwest Litho Clinic. Members of the Dallas and Houston Litho Clubs (bottom) presenting a skit at Clinic's annual dinner. The skit poked fun at 10 percent discount salesmen.

THE most diversified program in its history attracted a record number of 600 lithographers and guests to the 10th Annual Southwest Litho Clinic, held June 24 to 26 at the Rice Hotel, Houston, Texas.

Six technical sessions, held simultaneously, all day June 25th, highlighted the educational program of the meeting. Topics covered by the sessions were Copy Preparation; Camera; Platemaking; Stripping; Large Offset Press; and Small Offset Press.

Rae Goss, president of the National Association of Litho Clubs and guest speaker at the dinner-dance held the evening of June 25th, emphasized the need for more support of educational efforts in the graphic arts.

In spite of heavy rains, which flooded areas of Houston, the final session on the morning of June 26th was well attended. The meeting covered magnetic check imprinting and automated sorting, with Robert D. Meason, banking and finance representative of International Business Machines, leading the discussion. In his talk on the subject, Mr. Meason

emphasized the importance of real quality control in any magnetic imprinting operations.

Members of the Dallas and Houston Litho Clubs were commended for their efforts in bringing the clinic to its successful fruition. Chairmen and officers of the clinic were Edward Blackstone, general chairman; Edward Rocky, Copy Preparation; Robert Salee, Camera; Julio Zaccagni, Stripping; John Thomas, Platemaking; Robert Tucker, Large Press; Elwood Sayers, Small Press; Donald McNalis, Trade Fair; Jay Lyn Taylor, Publicity; Thomas Joyce, Hospitality; Frances Porter, Registration; James Blair, Hotel; Robert Chester, Entertainment; Jarold Joseph, Mailing; Martha Chester,



Happy faces were evident at a cocktail party preceding the opening of the exhibit.

Ladies Program; James Hendrick, Treasurer; and Kenneth Joseph, special advisor.

The 11th annual clinic will be held next June at Dallas.

NAPL Unveils Program

A tentative program for the 28th Annual NAPL Convention and Exhibit to be held in Chicago, Oct. 5-8, has been announced. The technical sessions planned so far are: Production Control in a Small Plant; Quality Control As It Is Being Practiced in Lithography; Costs from a Small Lithographer's Viewpoint; Budgetary Planning and Control; Depreciation and Salvage Values in the Economy of Today and Tomorrow; Selecting and Training Lithographic Salesmen; A Plan of Growth for the Lithographer (based on a survey now being conducted); Buying, Merging or Selling a Lithographic Plant; Photographic Derivatives; New Tools in Management Decision Making; Lithographing on Foil Stock, and Production Procedures (with a top panel of lithographic craftsmen).

A special three-day program has been planned for the ladies that will include two luncheons, a conducted sightseeing tour of Chicago, a visit to the "Top of the Rock," and the annual dinner-dance.

Following the convention luncheon, to be held Oct. 6, an address will be delivered by Harry Hershfield, the famous humorist.

The annual dinner-dance and entertainment will be held on Friday evening, Oct. 7.

Wagner Mach. Honors Bailey

Fred S. Bailey, formerly assistant manager of Wagner Litho Machinery Co., Secaucus, N. J., a division of National Standard Co., was recently presented a watch commemorating his 25 years of service with the company.

Walter H. Parkin, chairman of the board of National Standard, presented the watch to Mr. Bailey on his 25th anniversary. Mr. Bailey remains with the company as a consultant.

Gray Opens Plate Shop

Bernard Gray is opening a trade plate shop to service litho plants in the Pennsylvania, New York and Ohio area.

Located at 331 Parade St., Erie, Pa., the firm is called Ben Gray Lithoplate.

Sunshine to Expand Plant

Sunshine Art Studios, Inc., New York, has announced plans for a 200,000 square foot plant to be

erected in the near future in East Long Meadow, N. Y.

The 40,000 square foot warehouse area of the plant is being started at once and will be completed in November.

Bingham's Advances Keating

Sam'l Bingham's Son Mfg. Co., Chicago, has appointed James T. Keating as eastern district manager of its Bingham Bros. Division. He

will direct sales and service activities in the eastern area served by the New York, Philadelphia, Baltimore, Roch-



James T. Keating

ester, Jersey City, N. J., and Cambridge, Mass. branches.

Mr. Keating has been active in the graphic arts field since 1937 and has served Bingham Bros. in the capacities of salesman, assistant manager and manager since 1947.

DMAA Judging in August

Selection of prize-winning entries in the Direct Mail Advertising Association's 1960 Direct Mail Leaders Contest will take place in New York on Aug. 16. More than 60 such winners, in separate categories, plus the winner of the Gold Mailbox, will be announced during the course of DMAA's 43rd Annual Convention to be held Oct. 9-13, at Miami Beach. Announcement will also be made at that time of the winner of the Henry Hoke Award for the best solution of a difficult direct mail problem.

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PULSED XENON ARC LIGHTING



...saves time and money... gives better results!

...because only ascorlux offers you all these advantages:

<ul style="list-style-type: none"> ■ Constant color balance ■ Clean operation cuts-down remakes ■ Cool operation—less air-conditioning ■ Constant intensity for better control of automatic processing ■ Instant stop and start—no warm-up ■ Highly efficient reflectors ■ Shortened exposure time for increased production 	<ul style="list-style-type: none"> ■ Safe, low pressure operation ■ Reduced power consumption ■ Improved working conditions ■ Minimizes streaks and scratches ■ Requires less maintenance—no changing and setting carbons ■ Safe, dependable, heavy-duty operation ■ Models for every camera and printing operation
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Ascorlux A1146 (illustrated)—Double-deck 4-lamp set (1000 watts per lamp) in combination with 2 compact B1144 power supplies. Also, a wide range of camera lamps, printing lamps, light units, and power supplies (300 watt to 3000 watt) to meet most requirements and budgets. Write for complete technical information and prices.

AMERICAN SPEEDLIGHT CORPORATION
 63-01 Metropolitan Ave. • Middle Village 79, N. Y.

LPNA Protests

As a part of its presentation, July 26, before the U. S. Tariff Commission and the Committee for Reciprocity Information, against any further reduction of tariffs on lithographed goods, the LPNA protested the favorable tariff preference already given to Cuba on such items as labels and wraps for cigar boxes.

"At the present time," the reports states, "the United States grants Cuba a duty preference of 20% on all its shipments to this country. . . . This preference is a means of financing the unfriendly totalitarian regime now in existence in Cuba and should no longer be tolerated."

Manz Names Executives

The appointment of a team of executives who will head Manz Corp.'s re-activated creative division, was announced in June.

Richard M. Ray, who was recently elected vice president, will head the creative division. Robert F. Garty will serve as assistant to the vice president, Richard L. Conover as division manager, and James K. Westfall as account supervisor.

These men will be the nucleus of the new division that will specialize in developing or expanding external publications, wholesale and retail catalogues, displays, dealer helps and collateral materials for the Chicago firm. Editorial and art service will also be provided.

A marketing service will also be offered for new products. This will include initial counseling of the manufacturer on research and sales, definition of market areas and preparation of complete sales kits.

The new service division will operate on a nationwide basis, utilizing personnel drawn from merchandising, graphic arts, general promotion, media sales and advertising, the company stated.

Among the publications originated by the firm are Hudson Motor's *Hudson Family Magazine*, Oldsmobile's *Rocket Circle*, the Gas Industry's *Good Living Magazine*, United Airline's *Mainliner* and *Holiday Inn Magazine* published by Holiday Inns of America, Inc.

Boost Phila. Tourist Program

A million leaflets, urging tourists to "Visit Philadelphia, U. S. A.", have been printed free of charge, as a public service for the city, by Majestic Press of Philadelphia.

The leaflets are a part of a program by the city administration to change the general conception of Philadelphia "as a stately but down-at-the-heels dowager." The program was initiated in conjunction with President Eisenhower's "Visit U. S. A. 1960" program.

The leaflets point with pride to the changing face of the city, with its

new skyscrapers and business areas, and parks and recreational facilities, in addition to new restaurants, night spots and summer playhouses. All this, the leaflet points out, is added



Bernard Green (left) president of Majestic Press hands first batch of flyers to Philadelphia's City Representative Fredric Mann.

to the old, well-known historic sites, such as Independence Hall and Congress Hall.

The leaflets, a single page printed in two colors, were delivered recently by Majestic to Frederic R. Mann, city public information representative, for distribution to travel agencies, airline, railroad, and steamship offices, and automobile clubs.

Ed. Council Honors J. A. Co.

As a part of its program to foster Junior Achievement activities in the graphic arts, the Educational Council of the Graphic Arts has selected the Jawco, Junior Achievement Printing Co., Nashville, Tenn., as the outstanding one of its kind in the country. It is sponsored by Williams Printing Co., Nashville.

Selected for second place honors was the Pied Pica Print Shoppe, Fort

Wayne, Indiana, sponsored and counseled by the Fort Wayne Club of Printing House Craftsmen.

The Education Council of the Graphic Arts Industry has available for use by printers and local printing trade groups a manual on how to organize and counsel junior achievement printing companies. The council has urged the printing industry to sponsor such companies as a means to recruit, select and eventually employ qualified young people for craft, sales and managerial positions.

Richard Small, president of the council, states that, "participation by young people in these companies teaches them the facts of business and industrial life in our country as no other educational experience could possibly do."

Mr. Small amplified his statement by quoting from a report by the Opinion Research Corp., Princeton, N. J. of a survey of high school seniors, in which it was found that—61 percent did not believe in the need for profit; 83 percent estimated current industrial profits at 50 percent; 53 percent recommended government ownership of banks, railroads and steel companies; and 55 percent agreed with the theory "from each according to his ability; to each according to his needs."

In a survey conducted by Charles Weber, R. R. Donnelley and Sons Co., Chicago, chairman of the council's J. A. Printing Company Committee, it was found that approximately 40 J. A. printing companies were sponsored by various companies

The Junior Achievement Committee of the Educational Council of the Graphic Arts. They are (l to r): Haige Garabedian, PIA of Conn. and Western Mass.; Charles Weber, R. R. Donnelley and Sons, Chicago; Hugh B. Sweeny, Junior Achievement Inc., New York; James Stuart, Jr., McCall Corp., Dayton, O.; and Samuel Burt, Educational Council.



last year. "However," reported Mr. Weber, "a number of them were sponsored by non-printing organizations. Only a handful of printing companies were sponsoring J. A. printing groups." Members of the Education Council's J. A. Printing Company Committee are Lee Augustine, James Stuart, Jr., and Haige Garabedian.

Copies of the J. A. Printing Company Manual may be obtained from the council at 5728 Connecticut Ave., N.W., Washington 15.

Leder Joins Schneider Press

Schneider Press, Inc., New York printers and lithographers, have appointed William Leder to their sales staff.

Mr. Leder was formerly with Hinkhouse, Inc., as sales manager.

Coronet Printing to Move

Coronet Printing Co., 1969 W. Hampton Ave., Milwaukee, will move during August to a new building at 6715 N. Teutonia Ave.

The company, which does offset and letterpress printing, has 12 employees.

CIT Alumni Elect Pressman

A new slate of officers elected recently to head the Alumni Association of the School of Printing Management of Carnegie Institute of Technology in Pittsburgh includes several lithographers. They are Harold B. Pressman, Pearl-Pressman-Liberty, Philadelphia, president; Gene A. Musial, Herbick and Held Printing Co., Pittsburgh, secretary-treasurer; David W. Ellis, Herbick and Held Printing Co., Pittsburgh,

recording secretary, and Thomas E. Brinkman, Cincinnati Lithographing Co., Cincinnati, Ohio, regional vice president.

Arandell Expands in Wauwatosa

Arandell Corp., Wauwatosa, Wis., has announced plans to expand its present plant by an addition containing 18,000 square feet and adding new printing equipment. The cost of the expansion was not disclosed.

Carl Feltes has rejoined the firm after serving as vice president of Litho-Graphic Corp., Wauwatosa.

Durst Appoints Mark

Durst, Inc., New York, has appointed Melvin Mark as manager of its graphic arts division. He has been an administrator of the Manhattan School of Printing.

The company is expanding into the graphic arts field with the introduction of its G-139 vertical process camera and color separator. Mr. Mark will direct the sales, promotion and product development of this new line and supplement the present staff of technical consultants to the trade.

Moore to Build in Ill.

Moore Business Forms, Inc., Niagara Falls, N. Y., has announced plans for construction of a new plant in Charleston, Ill., for the manufacture of business forms. Completion is scheduled for the first part of 1961.

This will be the 21st Moore plant in the United States. The parent company, Moore Corp., Ltd., operates 11 other plants in Canada, Mexico and Cuba.

The Charleston plant will be approximately 75,000 square feet in size. The investment in the plant and the equipment planned for it will ultimately be in excess of \$1,000,000.

PDI Moves Exec. Offices

Printing Developments, Inc., New York, a subsidiary of Time, Inc., has moved its executive offices to the new Time-Life Building in Rockefeller Center.

New York Binders Sign Six Year Contract

A SIX-YEAR contract, the longest term ever negotiated in the New York commercial printing industry, has been agreed to by the Printers League Section, New York Employing Printers Association, and the New York Paper Cutters' and Bookbinders' Union No. 119. The agreement, covering 5,000 bindery workers in New York commercial printing plants and trade binderies, went into effect following ratification July 16 at a meeting of the Bookbinders' union.

It provides for an immediate increase of \$4 a week in wages and \$1.25 in welfare fund payments for journeymen cutter-operators, with proportionate increases in other job categories, and further increases of the same amount effective July 1, 1961. The present \$4 increase brings the scale for journeymen cutter-operators to \$118.45 a week.

The purpose of the long-term contract is to stabilize conditions in bindery operations within the New York printing industry in order to encourage industry growth, according to a joint statement by Joseph Hellman, president of Local 119, and Anthony Perrusi, president of the Printers League Section.

The contract includes a formula providing for periodic wage adjustments, beginning in 1962, based on general wage patterns in the New York printing industry.

Mr. Perrusi said the contract will be of value to the industry and its customers, because its six-year term will provide stability and known costs over a longer period than ever before. "While the wage increase will necessarily be reflected in the industry's prices," he continued, "it is in line with increases being granted in other industries and may be offset in the long run by labor-management cooperation in putting new technological developments to work for the benefit of our customers."

Notice

Martin Publishers Service, Inc., New York, is no longer authorized to handle new or renewal subscriptions to Modern Lithography. Any inquiries about subscriptions handled by this agency should be directed to the Circulation Dept., Modern Lithography, Box 31, Caldwell, N. J.

First Class From Joint Council Program Graduates

THE FIRST class of 83 students has completed the one-year course, in various aspects of lithography, which is being conducted by the Joint Lithographic Educational Council of Metropolitan Washington, in cooperation with the Graduate School of the U. S. Department of Agriculture.

At the commencement exercises, at Gallaudet College for the Deaf, Walter McArdle, president of PIA, presented completion certificates to the students and spoke to them of the importance of education in making them more valuable to an employer and thus more likely to be successful in business.

Dr. John Holden, Dean of the Graduate School, explained the number of opportunities available to those in the D. C. area, to further their education by attending night courses at a nominal fee.

The Joint Council has requested contributions of \$1,000, over a four-year period, from five of the leading graphic arts associations in the Washington area. At present the Washington Litho Club and the International Printing Pressmen's and Assistants' Union have pledged their shares.

The Council has purchased an offset press, which has been set up at Gallaudet College. During the day the college will use it for training the handicapped, and in the evening it will be used for the litho courses.

Six courses have been set up to begin in September. The courses and instructors are: Offset Presswork, Leo Krebs, Capital Printing Ink Co.; Offset Lithography, Black and White, Joseph Rankin, U. S. Department of Agriculture; Stripping and Platemaking, Joseph Hamm, U. S. Department of Agriculture; Offset Estimating, Russell Clark, U. S. State Service; Theory of Color, Oscar Rodbell, Walter Reed Hospital, and Survey of Lithography, Robert Lefebvre, U. S. State Service.

Administration of the program is by a council composed of representatives of the Washington Litho Club,

the Printing Industry of Washington, the Printers and Supplymen's Guild of Washington, the Amalgamated Lithographers of America, the International Printing Pressmen's and Assistants' Union, the U. S. Government and representatives of union and non-union employers.

Information on the courses is available from the Graduate School, U. S. Department of Agriculture,

14th and Independence Ave., S. W., Washington 25, D. C.

Lunn Retires at Nazarene

Mervel S. Lunn, 74, retired July 18 as manager of the Nazarene Publishing House, Kansas City.

Mr. Lunn began as manager of the printing house in 1922 when it was doing an annual business of \$135,000. Last year it did \$3,069,000 in business.

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12" x 18"	65.00	9.00
13" x 16"	65.00	9.00
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		16" x 20"	\$150.00

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Lyle Will Report on New Developments at PIA

PAUL LYLE, executive vice president of Western Printing and Lithographing Co., Racine, Wis., will report on new developments in letterpress, offset and gravure on Oct. 24 at the PIA convention in Chicago. His report will be related to the equipment which will be on exhibit at the newly conceived PIA Graphic Art Equipment Exhibit during the convention.

Mr. Lyle is vice president of PIA's Web Offset Section and first vice president of the Research and Engineering Council of the Graphic Arts Industry.

The equipment show will be held in the Exhibit Hall of the Sheraton Park Hotel and will be conducted by the Printing Industry Educational Exhibits Corp., which is directed by A. E. Giegengack, its president and general manager. Mr. Giegengack has managed all four of the equipment exhibitions conducted by the National Graphic Arts Expositions, Inc.

The show is planned instead to highlight and emphasize new developments in machinery, equipment, supplies and services to the industry. It will be conducted to serve as a market place where people from the industry may evaluate new developments and discuss their purchase.

The exhibit will be open to members Oct. 24 to 28, for non-members Oct. 26 to 28.

Tied in with the Equipment Show, PIA will hold a production session and technical forum on Oct. 28 and 29 for foremen, supervisors and man-

agement personnel concerned with production and equipment and supply purchases.

The exhibit manager reports that out of the available 110 booths in the exhibit, 75 have been sold to 43 exhibitors.

Craftsmen Elect Three Lithos

Lithographers occupy three posts in the new slate of officers of the Chicago Craftsmen's Club. At the annual meeting John A. Radziewicz, Service Offset Corp., was elected president; Norman Romsted, U. S. Lithograph Co., second vice president; and Ernest Simmons, Curt Teich & Co., financial secretary. Others elected are: Harry Deck, Deck-Kuehn Associates, first vice president; Elmer Schwartz, United Electrotypes Co., treasurer; and Donald Smith, Smith Typesetting Co., recording secretary.

S & V Opens Boston Plant

Sinclair and Valentine Co., New York, has opened a new, 16,000 square foot printing ink plant in Boston.

Operations began at the new facility at 36 Franklin St., on July 18. The new plant will manufacture the complete line of the company's printing inks and will service and sell its chemicals and supplies.

Copease Names New Manager

Copease Corp., New York, has appointed Burke N. Judd as assistant manager of the Duplicating Division. Mr. Judd will assist James Hertsch,

Duplicating Division manager, in supervising sales of Copilith Offset Presses and Banda Spirit Duplicators in the United States. He was formerly with the Photostat Corp., Rochester, N. Y.

Screen Printers Meet in Nov.

Screen Process Printing Association, International, expects a record attendance at its 1960 convention, set for Nov. 11, 12 and 13, at the Hotel Sherman, Chicago. Numerous workshops on technical problems are scheduled, along with a large exhibit of screen process printing equipment. The usual convention banquet will not be held, but two luncheons have been arranged.

General chairman of the Chicago meeting is Wm. Wolke of Kalmus & Associates, Chicago.

Oz Buys Stanley Greetings

Stanley Greetings, Inc., Dayton, greeting card manufacturer with offices and production facilities at 605 S. Patterson Blvd., has been purchased by the Oz Publishing Corp., New York.

Gordon K. Greenfield, president of the America Corp., from which Stanley Greetings was purchased, will become a member of the combined firm's board of directors.

Stanley greetings was founded in 1911 by George Stanley, Sr., and was purchased in 1955 by the America Corp.

Duval Joins Hammermill

Albert F. Duval has been elected a vice president of Hammermill Paper Co., Erie, Pa. Mr. Duval was president and director of United States Envelope Co., Springfield, Mass., until his resignation during June.

Until his election as president of U. S. Envelope, earlier this year, Mr. Duval had held the position of vice president in charge of sales for all products of the company. He had been with the company for 14 years.

Consolidated Bowlers Awarded Annual Trophies



Trophy winners in Consolidated Lithographing Corp.'s bowling competition. The winning team consisted of Edward Henkel, Richard Sirignano, Allan Silenzi, and Rose Cavalcante.

Type Drive-in Opened

Western Typesetting Co., Kansas City, has installed one of the nation's first type drive-ins in an alley adjacent to its building.

Customers can place their typesetting orders in a pick-up box attached to the building without leaving their cars.

Graphic Press Doubles Facilities

Graphic Press, Inc., Cleveland, one-year-old litho firm, recently moved its operation to a new site at 4336 Lee Rd., doubling its original facilities. The firm is expanding its staff to four full-time and 13 part-time workers.

Miss Jeanne Kerr is president and Ronald Dellon sales manager of the company.

Will Hold Cartographic Course

Dr. J. Albrecht of the Fogra Institute, Munich, Germany, has organized an International Course for Map Printing and Reproduction, which will be held at the Institute in Munich, Oct. 3-9.

The Program of the course will cover camera work and platemaking techniques, paper, color and ink. The course will include a number of practical demonstrations of the material covered. Emphasis will be on the European techniques.

Details are available from Dr. Albrecht at Fogra-Institut, Bamberger Haus in Luitpoldpark, Munich.

Will Set Up JA Company

The board of directors of the Printing Industries Association of Western New York has voted to sponsor a Junior Achievement printing company.

Eugene Wink of Wm. J. Keller is chairman of the committee directing the project.

Crown Elects Siebert VP

Robert J. Siebert has been elected vice president of Crown Cork & Seal Co., Inc., Philadelphia. Mr. Siebert will direct all of Crown's manufacturing and sales activities in the West.

Roberts & Porter Moves to New Chicago Plant



Roberts & Porter, Inc., New York, has moved its Chicago operations into a new building at 4140 West Victoria Ave. in the northwest section of the city. The new building

features temperature-controlled areas for warehousing photographic materials and presensitized plates.

The building is located close to new expressways and main highways.

SUPERB PERFORMANCE AT A LOW, LOW PRICE*

nuArc HI-LITE ARC LAMPS

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Uniform coverage—steady burns (color and intensity)—economical operation—low initial cost... what more could you ask for in an arc lamp?

Hi-Lite Arc Lamps are economical to operate. For example, a pair of H-66 lamps produce 75 amps at the carbons but draw only 15 amps per pair from the power line. Patented mechanism causes carbon arc to re-strike automatically at timed intervals—eliminates bouncing or sputtering.

Also available: Model H-65, 75 amp printing lamps—price, \$350.00 each; with built-in timer, \$385.00.

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Jefferson Expands Plant

Jefferson Printing Co., St. Louis, recently expanded its plant at 3828 Washington Ave., with the construction of a two-story building with 17,500 square feet of space.

Brazier Becomes Besco Pres.

William S. Brazier, formerly executive vice president of Bridgeport Engraver's Supply Co., Inc., Bridgeport, Conn., a subsidiary of the Bridgeport Brass Company, has been elected president at a meeting of the board of directors. He succeeds Elwood W. Schwerin who was elected chairman of the board and general manager.

Mr. Brazier joined the company in 1936. In 1957 he was named manager of the Boston office and was



William S. Brazier

elected a vice president in 1958. He was named first vice president and then executive vice president in 1959.

Ludlow

Offers Many of the Larger Sizes

The Ludlow-equipped composing room can have large type sizes essential for important news heads and advertising display. They are cast from Ludlow matrices as needed, assuring a type supply for continuous production.

Only on the Ludlow are large sizes readily obtainable in slug-form. Attractive Ludlow typefaces such as these are available up to and including 84 and 96 point—

Bodoni Bold and Bodoni Campanile
Gothic Bold Condensed Title and Condensed Gothic
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LUDLOW TYPOGRAPH CO.
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LITHO CLUB NEWS

(Continued from Page 76)

tion, citing some of the better known principles used in the process.

Mr. Harris directs the company's chemicals division at Dayton, Ohio.

Detroit

Will View Lighting Program

The Detroit Edison Co. will present a talk and demonstration on the newest developments in lighting at the Sept. 8 meeting of the Detroit Litho Club. The meeting will also be the club's annual Ladies Night.

A presentation on a newly developed masking system is being planned for the October meeting of the club.

Shreveport

Study Composition Problems

Marvin McCarley, McCarley's Typographers, presented a discussion of typography and composition and their applications to lithography at the July 25 meeting of the Shreveport Litho Club.

The presentation was followed by a question and answer period.

Milwaukee

Set Plans for Luau

The Milwaukee Litho Club has announced plans for a special Hawaiian Luau and dance to be held Nov. 5 at the Bowlero. Tickets, at \$10.00 per couple, are available from Roy Tenge, 2415 N. 66th St., Milwaukee 13, Wis.

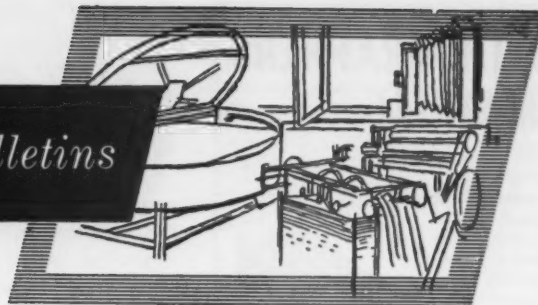
Cincinnati

Yearly Family Picnic Held

The Cincinnati Litho Club holds its annual family picnic Aug. 6 at Laumann's Grove, outside Cincinnati, with more than 100 members and guests attending.

The next regular meeting of the club will be held Sept. 13, with a board of directors meeting scheduled for mid-August.

Equipment, Supplies, Bulletins



Offer 18" TransferMate Camera

THE Godkind Co. has introduced a vertical 18" camera called the TransferMate.

According to the company, the camera exposes film and paper up to 14 x 18" and is specially designed to meet the first-step photographic needs of Ektalith, Gevacopy and other matrix-transfer processes. It serves equally well, the company points out, in the production of line and half-tone negatives.

A portion of the camera's top surface and recessed shelf accommodate both the Ektalith Loader-Processor Unit and the Ektalith Copy Unit, making one integral unit of all.



18" TransferMate Camera

Information is available from the company at Dept. P, 112 Arlington St., Newark 2, N. J.

Paper Conveyor Introduced

Mercury Industries, Inc., has introduced a two-section belt conveyor for use in graphic arts plants, paper houses and paper mills.

According to the company, the conveyor works on the same level as the cutting machine, feeding paper to the cutter and from the cutter to the wrapper. The handler feeds the paper in lifts from cartons and skids to the belt conveyor when required. The lifts travel to the cutting machine operator, who controls the movement by push button.

Describe Feed Roll Presses

A booklet giving full details on two small offset presses equipped with feed roll registering systems is now available from the Harris-Seybold Co. The 24-page booklet describes

the feed roll-equipped single-color press in the 20 x 26" and 23 x 29" sizes.

The booklet incorporates four-color process pages to describe feeding, register, dampening, inking, printing and delivery features. Also included are specifications and floor-plan diagrams.

Copies are available from the company at 4510 E. 71st St., Cleveland.

Restyle Meteorite Camera

Robertson Photo-Mechanix, Inc., Chicago, has introduced a new version of its Meteorite vertical camera. Known as the MK-1A, the camera maintains the same film and copy-board capacity as its predecessor, as well as the same enlargement and reduction ratio.

Among the changes are a restyled top eliminating sharp corners,

restyled legs and lamp housings, a steel top in place of the older wood insert, and the overall height has been lowered by one inch.

Booklet Covers Business Papers

A new specifications handbook for cotton fiber business papers has been published by Kimberly-Clark Corp., Neenah, Wisconsin.

The handbook, for use by distributor salesmen, gives specifications for each grade of Neenah business papers, including colors, weights, finishes, packaging and availability of matching envelopes.

A section on product information also includes advice on special watermarking, specialty and technical papers, and other information of interest to the paper buyer and seller.

New Cold Cathode Lights

Mervap Cold Light Products has introduced a new line of cold cathode lights designed for use in color separating, halftone and line work.

The line consists of two models—Monolite, a single lamp and Duo-Lite, a two layer lamp. Both models are available in whitetone, for all purpose work, or bluetone, for any non-color work. The lights come in sizes from 12 x 12" to 32 x 41".

According to the company, the lamps work on standard 110 volt AC current, and are not affected by normal current fluctuations.

Among the features cited by the company are: low operating temperature, absence of fumes, dust or glare, low current consumption and absence of carbons to change.

Information is available from Dept. 88 of the company at 3513 Venice Blvd., Los Angeles 19.

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A "must" for Advertisers, Printers, Lithographers, Letter Shops, Schools and Colleges — of real help to the artist, craftsmen and students of reproduction processes.

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Platemaking procedures and materials
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paper, ink, film and supplies used
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The flow of lithographic production
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Education for lithography

Resources sections showing equipment and supplies follow each chapter thus providing valuable source information.

Two volume set \$25.00 plus shipping charges. \$1.50 east of the Mississippi and \$2.00 west.

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New Ink Conditioner Introduced

Nasca Compound, Inc., has introduced a newly developed compound which it reports, will prevent ink offset; sticking to blankets; keep halftones and reverse type open; prevent crystallization and picking; and maintain color value. In addition, the company reports that with the compound 30 percent less water and 20 to 25 percent less ink are used.

The compound is mixed directly into the ink and will, reportedly, blend easily with any offset and letterpress ink, without adversely affecting it.

Information on the compound is available from the company at 249 Amos Ave., Oceanside, N. Y.

Automatic Time Keeper

A new automatic, elapsed time computer, for use in determining time costs on each employee in a plant, has been introduced by the Calculagraph Co.

The machine, which is relatively small, weighing only 16 pounds, stamps starting time on a worker's card as he begins and actual time elapsed, at the end of a job.

The company points out that in addition to overcoming the factor of

human error in time computations, the machine provides a variety of cost information. It provides a record of the hours of work per job of any order going through the plant and aids in determining the amount of time spent on a given job in each segment of the production process.

The machine employs a positive jump advance of either 1/10 of an hour or one minute. Its overall dimensions are 8 1/8" x 9 7/16" x 10 19/32".

Information on the computer is available from the company at 306 Sussex St., Harrison, N. J.

Crescent Offers New Ink Line

Crescent Ink & Color Co., Philadelphia, has realigned its offset quick setting ink line under the trade name of "Speed Spectrum."

The name, according to the company, was chosen to denote the fast setting quality of the ink in combination with the company's color matching service.

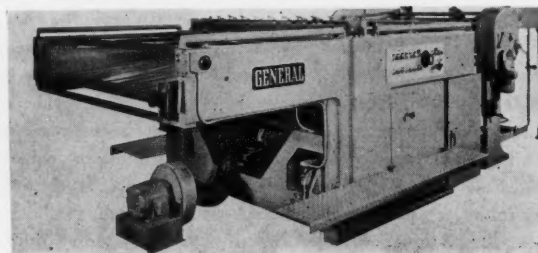
The inks will, reportedly, print on cartons, coated and other offset papers, black and white, process color and all other colors. Instant setting is claimed on coated stocks, and slightly slower on uncoated stocks.

General Adds Two Presses to 60 Series

General Research and Supply Co., Grand Rapids, Mich., has introduced two new models in its 60 Series line of high-speed automatic screen process presses. The new units, Models 58 and 64, handle sheet sizes up to 42"x58" and 44"x64", respectively, and feed them automatically at speeds up to 2,000 per hour, according to the company.

Some features cited by the company are stepless speed drive with all current converted to DC for con-

trol of speed from standstill through full operation; push-button control with a single, simplified control panel for all functions, and vacuum tape delivery system which provides a positive hold on every sheet to prevent slippage and pile-up. Presses are equipped to feed and print all types of stock in weights from 16 lb. bond to 10 pt. board. With special modification presses will accommodate up to 100 pt. and corrugated board.



One of the new presses in General Research and Supply Co.'s new 60 Series line of high speed, automatic screen process presses.

Distribute Stripping Machine

Gane Bros. and Co., have been named distributors for the new Ehlermann stripping machine in the United States.

The unit is equipped with an automatic pile feeder which feeds from the bottom of the stack, thus permitting continuous reload of the hopper with no interruption of production. The feeder is safety-equipped with an automatic throw-off which stops the motor automatically when the hopper is empty and no work being fed.

The equipment will, reportedly, handle a range of sizes from 4 x 4" to 20 x 14" and accept thicknesses ranging from 1/16 to 2". Maximum tape overlap back and front is 1".

Gummed or ungummed tapes, with hot or cold glues, may be used, as well as pressure-sensitive tape, according to the company.

Information on the unit is available from the company at 430 Canal St., New York 13.

Safety Paper Featured

A new line of Duplex safety papers introduced recently by Mead Paper Inc., New York, is featured in a new sample booklet being offered by the company.

The booklet, which shows the three patterns and six colors available in the new line, is available from the company's paper merchants.

Offer New Cronar Base Films

Du Pont Photo Products Division has introduced two new polyester-base graphic arts films designed for color separation and masking work.

They are "Cronar" Commercial-S, a general purpose blue-sensitive film, and "Cronar" Pan Masking, a pan-chromatic film designed particularly for camera back masking. Both are on .007 inch "Cronar" polyester photographic film base which, according to the company, lies flat, dries quickly, and is highly durable.

The company reports that Commercial-S can be readily knife-etched and has good scribing characteristics and dye acceptance. Special surfaces on both sides are designed to protect

against Newton's rings and air bells, and a non-halation backing is designed to insure against maximum image sharpness. The new film is recommended by the company for continuous tone negatives and positives, for masking where a heavy-base film is required, and for reproduction of artwork which combines continuous tone and line material.

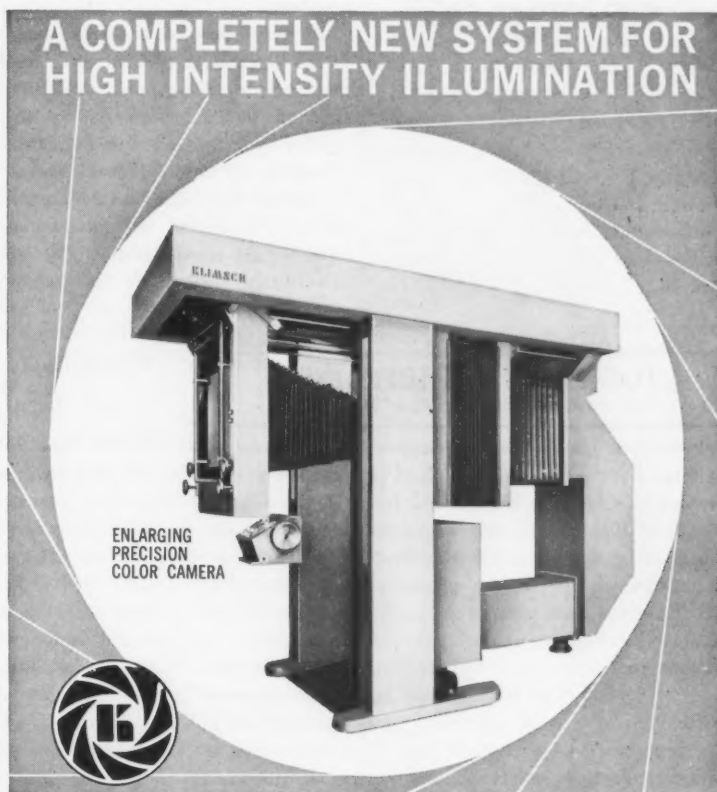
"Cronar" Pan Masking film, now on 7-mil base, has no anti-halation backing and can be exposed through the clear base for camera back mask-

ing and pre-masking of color transparencies.

Technical data folders on both films and Graphic Arts Technical Bulletin No. 19 on the use of "Cronar" Pan Masking film in camera back masking are available from the company at N-2430A, Wilmington 98, Del.

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Royal Zenith Corp., New York, has introduced a new 40" pre-angled,



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circular contact screen in magenta and grey. It is reportedly the largest of its kind.

Developed by Policrom, an Italian manufacturer, the screens are also available in sizes 18", 24", and 31½"; all up to 200 line.

According to the company, a cameraman need only mark a center line on the camera back, then rotating the screen 45° or 90°, and guided by engraved notations on the screen edge, he can obtain any desired angle with minimum possibility for error.

Also available from the same manufacturer is a new 4-angle "Process-Pak" of rectangular contact screens for 3 or 4 color process work. Consisting of sets of 3 or 4 screens in 15, 45, 75 and 90 degree angles, packs are available in sizes ranging from 8 x 10" to 24 x 30" in 50 to 200 line models.

Information is available from the company at 180 Varick St., New York 14.

Noble Named Q. C. Winner

Dr. Carl E. Noble, Kimberly-Clark Corp., has been named the 1960 winner of the annual Rochester Institute of Technology award for "outstanding contributions in statistical quality control for the graphic industries."

Dr. Noble was selected for the award by the 20-member planning committee of the Institute's Extended Services Division. The division conducts annual quality control seminars for buyers and producers in the graphic industries, in which Dr. Noble has been active as a faculty member.

Dr. Noble has served as chairman of the Graphic Arts Committee and the Administrative Applications Divisions of the American Society for Quality Control and the Statistical Committee of the Technical Association of the Pulp and Paper Industry. He has a number of publications covering the theory and application of statistical methods to the graphic

arts industry and is a member of the editorial board of the *Industrial Quality Control* magazine. He has lectured in the United States and Canada, and last October gave a series of lectures in Italy on the application of statistical methods to the graphic arts industry.

He has been associated with Kimberly-Clark since 1946, and has been manager of market planning and research, Consumer Products Division, since 1958.

NYEPA Gets 1000th Member

Process Lithographers, Inc., New York, last month became the 1000th member of the New York Employing Printers Association. The firm was admitted at a special ceremony held July 18 in New York.

The organization is celebrating its 95th anniversary this year, having been founded in 1865 under the name Typothetae of the City of New York.

TOO MANY EXHIBITIONS?

(Continued from Page 35)

convention, is not designed to compete with nor replace the large equipment exhibition held periodically by the National Graphic Arts Expositions, Inc. PIA has already announced that in the years when this large equipment exhibition takes place, it will cooperate fully in encouraging its members to visit the exhibition, and during that year the educational show will not be conducted by the Printing Industry Educational Exhibits Corporation.

There are many considerations which cannot be discussed in a brief editorial comment, but the action taken by PIA this year is an outgrowth of discussions which have been carried on over the past eight years. It is a studied approach to satisfy insistent member demands for a central market place where they may view important new developments and meet with designated representatives of the supply industries.

Members of PIA will certainly look forward to the Eighth Graphic Arts Exposition when it is planned and announced by the National Graphic Arts Expositions, Inc. In the meantime, on an annual basis, PIA will satisfy demands and needs of its member companies. At the same time it is believed that it will provide a convenient and useful market place for hundreds of supply industry representatives who will assemble for discussion with PIA members during the period of the association's annual convention.

—BERNARD J. TAYMANS, General Manager,
Printing Industry of America, Inc.

FOREIGN VIEW:

'Equipment Clearly Labeled'

THE SUCCESSFUL beginning made at Paris, where Britain undoubtedly scored a resounding publicity success, must not be allowed to peter out. Ahead of us—albeit two years away—lie a mammoth Drupa exhibition in 1962 and Ipex in 1963. Already now the foundations must be laid for Drupa success. One idea, noted with interest at the March printing exhibition in Leipzig, would be for exhibitors to clearly mark their equipment as "new"—"altered construction"—"improved"—"larger size"—etc. This would save time for the visitor.

Another point is the size of Drupa. This exhibition is becoming too big! Concentration of exhibits in one or two large halls is preferable, even if individual stands have to be kept down in size, to the use of half a dozen large halls, separated by roads and bridges.

Perhaps there is still time to do something about size of exhibitions. There certainly is time to consolidate the British position at exhibitions, which is now beginning to be reestablished.

Achievements such as the world's fastest offset press, the new departure of hydraulics into the construction of two-revolution machines, and similar important developments, should be shown abroad; even considering the high cost of transporting machinery across the channel, the impact of such a display seems well worth the effort and expense in the endeavor to boost Britain's exports.

—From an article in *The Litho-Printer*,
British Trade Journal, June 1960 issue.

28 Begin Study Under Ed. Council Grants

BEGINNING in September, 28 students will be studying printing management, design and teaching under scholarship grants, totaling \$20,000, from the National Scholarship Trust Fund of the Education Council of the Graphic Arts Industry.

Of the twenty-eight students, nine will be studying under their third year grant, eight under their second year grant, and eleven as first year students. In addition, thirteen printing teachers were awarded summer school scholarships under a grant from Elmer G. Voigt (Western Printing and Lithographing Company, Racine, Wisconsin), president-emeritus of the Education Council.

Colleges being attended by the scholarship award winners are:

Carnegie Institute of Technology, Pittsburgh, Pennsylvania; Rochester Institute of Technology, Rochester, New York; Los Angeles State College, Los Angeles, California; Sam Houston College, Huntsville, Texas; New York University, New York, New York; Kansas State Teachers College, Pittsburg, Kansas; University of Houston, Houston, Texas.

The council will conduct its Printing and Publishing Industry National Scholarship Competition during the coming school year to award a minimum of five four-year scholarships with grants ranging up to maximum of \$1,000 per year, to start in September, 1961. The amount of the grant is based on financial need.

Students graduating from high school in January or June, 1961, and graduates during the previous three years, who have not yet entered college, may be eligible by taking the Preliminary Scholastic Aptitude Test of the Educational Testing Service on Oct. 18 or Oct. 22, 1960, in their high schools, and filing an application no later than Nov. 15, 1960, with the National Scholarship Trust Fund of the Education Council of the Graphic Arts Industry, 5728 Connecticut Ave., N.W., Washington 15, D. C.

Semi-finalists in this competition will be interviewed by a committee of printers in their community and will

take the College Entrance Examination Board tests.

Award winners will be chosen by a committee of educators on the bases of their scholastic record and demonstrated interest in making the printing industry their careers.

Additional information concerning the competition, is available from the Education Council.

QUALITY CONTROL

(Continued from Page 56)

parent in obtaining a good quality print. The grind factor is tested by using a grindometer which is calibrated from zero to 10 with two depth paths ranging from zero to .001 inches. The test is made simply by applying the ink to be tested above the deep end of the depressions and drawing the scraper down the length of the groove, carrying some of the ink with it (Illustration 8).

As the inks are drawn down, an abrasive action is visible when the particle size exceeds the depth of the plate. The numerical reading is made at the point where four streaks appear, each having a length of not less than $\frac{1}{2}$ ".

6. *Tack and Consistency—Lithographer requirement only*—Tack and consistency of inks are determined by an instrument known as the Inkometer, which is made by the Thwing Albert Company. This instrument provides a rapid means of evaluating the tack and consistency at standard temperature and film thickness. The instrument itself approximates the actual condition under which inks are used on the press.

The tack and consistency, of course, are major factors in the quality of printing and will have an overall effect on the actual make-ready time and press hours required for a given production. This instrument can be used and the specifications adjusted to establish relative tack of specific inks so as to obtain the proper gradation of tack from the first to the last colors for insuring proper trapping which is bene-

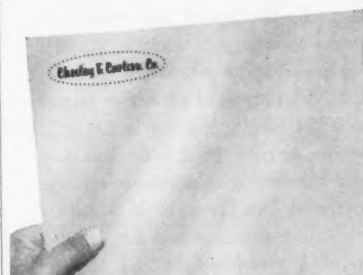


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ficial in the use of multi-color equipment.

In the actual operation of this equipment, the tack is measured by the controlled application of the ink to the rollers, in which the torque developed by friction when running the machine at high, medium and low speeds successively, is balanced by moving a sliding weight on the scale beam (Illustration 9).

A direct reading of the sliding weight scale beams enables one to determine a numerical factor. The installation utilizes only the medium speed on the equipment as this is the closest approximation to simulation of sheet-fed offset equipment. It is additionally the intent to establish tack in the proper value, plus or minus 2, before aging test and plus or minus 4 after aging test, which will minimize the time consumed by press operators in adjusting each ink to the specific requirements. To the extent that it is possible, ink is intended to be purchased so that it can be used directly by the press units without need for further adjustment.

7. Specific Gravity—Lithographer requirement only—Specific gravity is important since normally ink is bought by the pound and actual ink mileage is related to specific gravity. It is possible to get five pounds of ink to fill only half of a five pound can if the specific gravity is 1.9 or 2. Specific gravity of 1.2 or less will avoid this and give the most mileage for the dollar. This is a relatively simple test and is made by using a cup of a given weight and holding a given amount of ink, with the difference applied to a standard formula, thus obtaining specific gravity (Illustration 10).

8. Shelf Life—Lithographer requirement only—It is important, of course, when a supply of ink is bought that the product remain constant and stable during the reasonable time it is stored on the shelf. This test consists of placing a can of ink as received from manufacturer in an oven and exposing it to 175°F plus or minus 5° for 72 hours (Illustration 11).

The ink, after cooling to room temperature, should not show signs of "livering" or other deterioration. Final determination of satisfactorily meeting the shelf-life test is made by re-submitting the ink to the drying test, the tack test and the color test, because these factors are the most likely to be affected in aging.

9. Drying—Lithographer requirement only—There are two types of drying in lithographic, or any other ink, that it is important to measure. One would be the drying condition of the ink as printed on the paper for which the ink was purchased. The second factor is the drying time of the ink on the press.

It is obvious that it is important that the ink does not dry too quickly on the equipment to give operational leeway for down time, lunch period and other factors for which a wash-up is not desirable. The opposite is true from the print sheet standpoint, for it is desirable that the sheet dry as quickly as possible in consideration of subsequent printing or other handling of the printed material.

These two factors require the opposite in drying consideration and a balance in the specification must be made so both can be met. The drying test therefore has been separated into two types, one to simulate the press drying time and the other, the printed sheet drying time.

The press drying time is measured by making a controlled draw-down on non-absorbent material, specifically glass, and stating that this ink shall completely transfer under slight pressure onto a piece of offset paper after a given number of hours (Illustration 12).

In this manner the hours specified would indicate the press could be idle this number of hours without fear of drying. The test for the sheet equivalent drying time is made by simulated print, in the same manner as described for use in ink color testing. The sheet is placed under 1,000 sheets of offset paper, with the requirement that it be drawn from beneath the pile of sheets quickly after the specific number of hours. No transfer of ink should be apparent

on the paper immediately above the simulated print (Illustration 13).

As can be seen there has been an attempt to refer all relative ink factors to numerical values by instrumentation. With experience, these values can be adjusted to insure the most practical, economical printing possible and to insure by statistical analysis the best practical quality standard for the dollar invested. Our record of the quality factors of each ink is maintained for analytical purposes by a test sheet record.

Quality Measurement: Printed Material

Prior to getting into the system of evaluation the printer or purchaser must insure that the paper and ink utilized has met the requirements which have been established by specifications. Since good printing is possible even if these two materials are defective, this pre-printing evaluation is essential to avoid wasted effort and to insure highest degree of reliability for a successful end product.

Essential to the system is a means of measuring the color as printed and if, as in our case, the printed material is only a series of lines or type matter it would be necessary to include color blocks or bars along the entire length of the printed matter as the best means of measuring this quality (Illustration 15).

However, if the material or subject being printed has within it sufficient area of coverage to insure a means of measuring, this can be utilized.

It is necessary to have a means of determining the relative positioning of the image or multiple images on the material that is being printed. If the natural features of the subject do not provide a means of measuring the accuracy or the relative position, it will then be necessary to establish register marks for this purpose.

Establishment of a sampling system is also a pre-requisite to initiation of the measurement system. The techniques or mathematics of sampling need not be included in this presentation, as the knowledge for this requirement is certainly available to the reader of this magazine; however,

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some considerations that need be made can be discussed.

In establishing your random or sampling system, for instance, it is necessary to determine whether it is more practical for the printer or the printing buyer to do the sampling. The printer should sample on his premises during actual printing operations.

Additionally, both the printer and the purchaser should consider the possibility that if the printed product is sampled after completion while on skids, numbering in the sequence of production should be considered so samples as extracted can be marked in the same sequence of manufacture. This will provide an additional story as far as the trends, equipment, personnel, etc., are concerned.

This basic information would be of benefit to the printer as it could give him an indication of equipment defects, personnel capabilities or shift change effects and those related factors of his concern. However, to the purchaser of printed material, it would aid materially in having the best practical evaluation by insuring that if a certain portion of the run is deficient it can be segregated from the balance of the run which may not be affected.

At this installation we require our pressmen to sample sheets without inspection at a predetermined time and mark them as to relative position in the run. However, verification of samples is essential and is accomplished with a minimum of effort by having a quality control man or purchaser representative, as the case may be, obtain additional random samples during the printing operation and mark as to relative position in the run. This insures the accuracy of all the other samples, since the quality audit keynotes the verified sample throughout the run. The accuracy of the remaining samples is determined by verifying that the sample falls in the same general pattern or trend as the random samples supplied by the printer. Needless to say, if the verified sample is

not consistent with the random sampling, doubt must be cast as to the accuracy of the audit.

Quality Evaluation:

The quality measurement of printed material is divided into three factors which are of equal concern to the purchaser and lithographer: (1) registration, (2) color, (3) lithographic quality, which can be defined and analyzed as follows:

1. *Registration*—Acceptable printing quality is determined by requiring that register marks fall within a certain determined position on the sheet. State the maximum misregister allowable between any set of marks as the basis for determining overall registration quality. Misregistrations exceeding the stated dimensions will be considered a defect. An additional statement that internal register of chart detail shall be to the same degree as indicated by the register marks is necessary to insure that distorting possibilities of paper or other base materials are equal to the overall product rather than to your point of measurement. Internal or other points of concern relative to register should be spot checked to insure this accuracy.

2. *Color*: If the printer or the purchaser has verified the accuracy of the color by the millimicron reading as indicated in the first part of this article, then we are concerned here with the application of the color rather than of the factors within the color itself.

However, if the color measurement, as defined in the first part of this article, has not been evaluated as a separate quality factor, then it must be measured in the manner previously described. For the sake of economy, we feel it is most practical to evaluate the color prior to printing and in fact that is a basis for acceptance of the ink from the ink manufacturer.

On this premise of acceptance, it is necessary here only to measure the application of the color rather than all the inherent features of the color as an ink or raw material. As used here the term color defect is there-

fore defined as the degree the particular ink film thickness conforms to the ink film thickness specified.

To establish a means of measuring relative ink film thickness, it is first necessary to determine the filter or millimicron band having the highest reading when read from the simulated print. This filter will insure the most sensitive reading available for this particular color. The determination of standards is then made by taking various samples of the product in which the quality of the ink as printed is completely satisfactory to the requirement, too dark for the requirement and too light for the requirement. The readings of these three and readings of many samples will give a "histogram" necessary to establish the standard and the necessary tolerance, both from the limitations of the printing process and from the requirements of the product. We therefore have a published table in which each of our inks has listed the means of measuring, which includes the instruments, filter and the standard print as previously described and a reading which applies to the standard, the lightest and the darkest permissible. For example, ACP 319 Green, Wratten No. 25 red filter optical density reading would be as follows: (D-Optical Density)

Lightest	.41 D
Standard	.48 D
Darkest	.57 D

The standards and variations allowed for each color are a part of the specification in the printing instructions. Additionally, to facilitate or augment equipment measurement, a visual color comparator is supplied to give comparative indications of values including tolerances as indicated numerically on the specification sheet. A comparator, as such, is nothing more than a standard of the ink in question as printed on the material it is intended to be printed on in which a normal block plus the lightest and the darkest are specified (Illustration 15).

This is a guide which will be a supplement to the printer. However, final determination should always be by instrument and should be used



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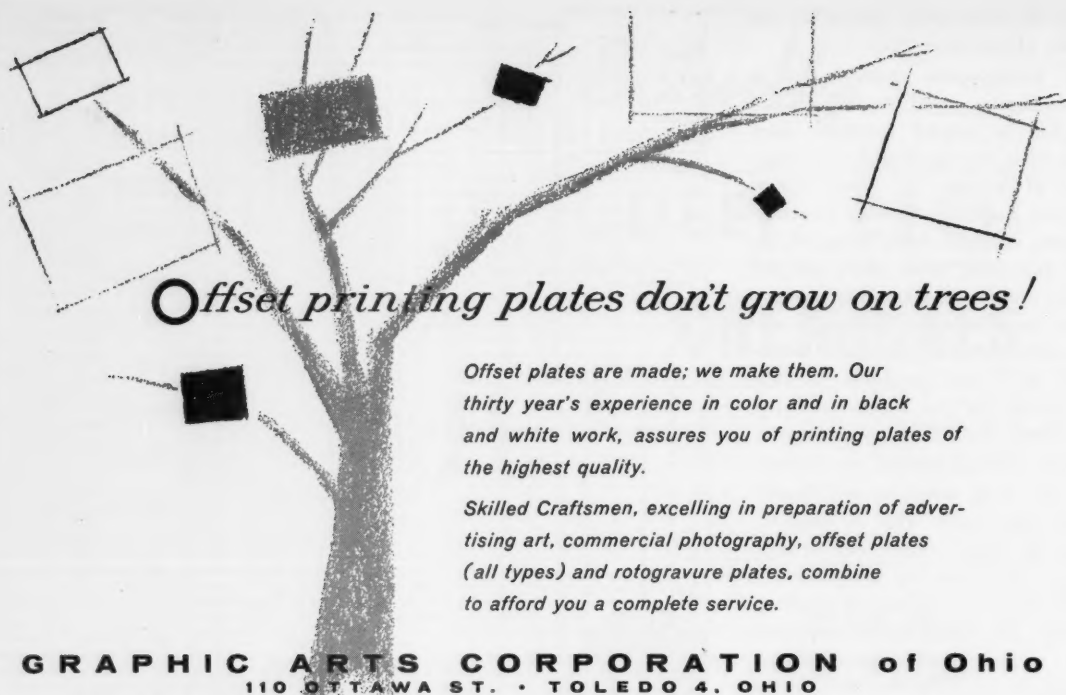


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No. 6 Critical Defect

Number of Colors \times Maximum Defect Points (6) \times
Percent Process Defect + No. 3 Defect
Point Value = Point Value No. 6
Defect

Example:

5-Color Printing Process Defect

No. 1 = 12%

5-Color Printing Process Defect

No. 3 = 6%

5-Color Printing Process Defect

No. 6 = 3%

No. 1 $5 \times 6 \times .12 = 3.6$ or 4

No. 3 $5 \times 6 \times .06 + 3.6 = 5.4$ or 6

No. 6 $5 \times 6 \times .03 + 5.4 = 6.3$ or 7

The use of the form can be understood when studying the sample filled out in Illustration 17). It should be noted that the total color defects column as it appears for each sample is the total of the number of defects as multiplied by the number assigned to the specific defect. For instance a No. 1 Defect has a total point value of one, a No. 3 Defect, three and a No. 6 Defect, six. Therefore, a sheet having one each No. 1, No. 3 and No. 6 defects would have a total color defect value of 10 points.

The Assigned Color Defect column merely applies the Total Color De-

fect number against the numerical system in the table column representing the number of colors in the print. Subsequently, a five color job would use the five column figure of No. 1—4 points, No. 3—6 points and No. 6—7 points. The table was based on the assumption of a 3 percent No. 6 Defect, 6 percent No. 3 Defect, 12 percent No. 1 Defect error in the process. This table should be adjusted according to the normal error defect of the particular printing requirement.

Results that have been achieved by this Installation have been significant and have proved what all of the quality control engineers already know, that a system of this type is not measured by how much it costs but how much it pays.★

TECHNICAL BRIEFS

(Continued from Page 61)

*FLUORESCENT LITHO INK USED IN RUN-OF-BOOK PUBLICATION IN AMERICA. Anonymous. *Printing World*, Vol. 164, No. 1,

January 7, 1959, page 22; *Printing Abstracts*, Vol. 14, No. 3, March 1959, page 168. Day-Glo lithographic ink was used in the October issue of the AOPA Pilot. The run went smoothly after a pre-production test which showed that the ink tended to pile up on the blanket. This problem was overcome by using medium coarse-grained deep-etch zinc plates which permitted a smoother, heavier deposit of ink. The fluorescent ink was applied in two impressions, running first with a blue and then with a black on a two-color offset press. Drying time was 3-4 hours between runs. Ink was used straight out of the can, and it was said that no special cleaning of the press was necessary.

Graphic Arts — General

STEREOSCOPICS! Frank Smith. *The Lithographer and Offset Printer*, Vol. LV, No. 11, November 1959, pp. 26, 28, 30, 3 pages. Author reports on an American development in stereoscopic printing called the "P.I.D." process. First, stereoscopic methods by Ives and others, especially those using lenticular screens or similar are reviewed. The "P.I.D." process makes use of a thin plastic sheet having 115 part cylindrical lines per inch, hence the sheet can be quite thin. The original photograph is made on specially coated tri-pack color film by a moving camera through a screen. Reproductions can be to exact same size only due to the need for a viewing screen. 4 line diagrams.★

EDITORIAL

(Continued from Page 33)

course, is the tendency of suppliers to hop on the band-wagon if they see their competitors on the list, regardless of whether they feel the particular exhibit has merit for them.

Some supply firms do weigh each exhibit on its own merits, exhibiting at some, while staying away from others. We know of no permanent harm that has come to them because of this selective approach. Furthermore, if the supplier feels it imperative that

his firm be represented at every show, in every part of the country, why can't consideration be given to the educational type of display which features photos, specifications and product literature, and a minimum of personnel, rather than actual working exhibits of equipment in action?

This certainly is not an easy question to answer to everyone's satisfaction. ML urges its readers to consider the comments in this issue to help in forming an opinion. The editors will welcome additional comments on trade shows—pro or con—from both suppliers and lithographers, for publication in future issues.★

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GRAPHIC ARTS TECHNICIAN interested in position with manufacturer or supplier as technical representative, or in product development and field testing. Background includes lengthy practical experience in printing production, research, plant modernization and product development. Address Box 702, c/o MODERN LITHOGRAPHY.

BINDERY FOREMAN with 30 years' experience and familiar with all machines in the line desires position as bindery foreman in a printing firm in Los Angeles, San Francisco or Hollywood, California. Address Box 703, c/o MODERN LITHOGRAPHY.

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OHIO—\$7,500
WANTED: Cameramen, platemakers, strippers, pressmen, compositors, proofreaders, monotype, folder operators, binderymen, offset pressmen.
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Obituaries

Robert B. Calvert

Robert B. Calvert, 51, president of two printing and lithographic firms in Cleveland, died on June 14. The head of the Calvert-Hatch Co. and Reserve Lithograph and Printing Co. was born in Cleveland and studied lithography in England and Germany. In 1941, he assumed the presidency of the two firms founded by his father, Percy N. Calvert, in 1941.

William A. Edelblut

William A. Edelblut, 72, retired vice president of the Judd and Detweiler Co., Washington, died in June after a heart attack.

Mr. Edelblut retired from Judd and Detweiler five years ago. He had been with the company since 1918.

Otto Vogl

Otto Vogl, 71, founder and board chairman of Chicago Printed String Co., manufacturers of gift wrappings, died July 6, at his summer home in Land O' Lakes, Wis.

Lloyd F. Neely

Lloyd F. Neely, president of Neely Printing Co., Chicago offset firm, died June 9 at the age of 73 years. He had founded the company 50 years ago.

C. Horace Bowman

C. Horace Bowman, 73, retired art director for Forbes Lithographing Co., Philadelphia, died in June at the

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STATIC-GO Stops static INSTANTLY—increases production! \$3.00 ea. for Giant size

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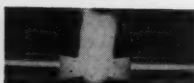
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Griffith Nursing Home in that city.
He was a member of the Sketch Club and the Poor Richard Club.

Melville E. Cunningham

Melville E. Cunningham, 69, vice president of Offset Print and Litho, Ltd., died June 30 in the Queen Elizabeth Hospital, Toronto.

Russell R. Brewer

Russell Ray Brewer, 59, Brewer-Chilcote Paper Co., Cleveland, died last month in Sea Island, Ga., as a result of brain injuries suffered in a diving accident.

Claude D. Kelly

Claude D. Kelley, 78, former partner in Kelley-Plummer Printing Co., died in June in Kansas City.

Mr. Kelley had retired five years ago from the company which he helped establish in 1933. He is survived by his wife Mrs. Bessie M. Kelley.

Incorporations

The following firms were recently granted charters of incorporation.

Capricorn Offset Plate Service, 128 White St., New York.

Woodside Litho and Printing Corp., 320 Broadway, New York.

S. D. and B. Printing Corp., Room 1501 Broadway, New York.

John M. Haasse Litho Co., 507 Fifth Ave., New York.

Raygene Lithographing Corp., 729 Elmont Rd., Hempstead, N. Y.

Brevities

MARTIN Q. MOLL of Christopher Press, Inc., Rochester, N. Y., has been appointed graphic arts board representative for the Rochester Advertisers Association for the coming year.

SMITH LITHOGRAPH CO., Richmond, British Columbia, has completed a \$500,000 printing plant containing 56,000 square feet of floor space which replaces the original Vancouver plant.

LOCAL BUYERS GUIDE

Advertising rates in the Local Buyer's Guide are: \$7.50 per column inch. Please mail copy and check or money order to Modern Lithography, P.O. Box 31, Caldwell, N.J.

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N.Y. 1-L0 4-1610

Reprints of Web-Offset Series

REPRINTS of the six-part survey of Web-Offset now are available. The 32-page booklet includes: Introduction, two general types of presses, four impression cylinder designs, buying accessories, planning, estimating, selling, figuring paper coats, and a complete picture section of all presses with specifications.

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CityZone.....State.....

'Web-Offset' c/o Modern Lithography
Box 31, Caldwell, N. J.

READERS:

Are you taking full advantage of your lithographic magazine?

THE staff of *Modern Lithography* has been trying, in several important ways, to make the pages of your magazine more valuable to you. Increased in-person coverage of litho club and trade association meetings has been one way. Interpretative articles on subjects of vital interest to you is another. That's the reason for our recent series on presensitized plates, three-color direct separation, and visits to typical litho shops and for our expanded coverage of the litho news in all parts of the United States and foreign countries.

Our climbing circulation figures indicate your appreciation of our efforts. But are you taking *full* advantage of your lithographic magazine? In past months, many of you have availed yourself of the services of our two regular columnists, *Frank Arbolino* (Press Clinic) and *Herbert P. Paschel* (Photographic Clinic). The purpose of this page is to remind you that if you have a troublesome problem regarding press or camera, these specialists are ready to help you solve it. If you are a subscriber to ML and have a question why not jot it down on the coupon below and send it along to us? We'll be glad to help you, and the service is free.

MODERN LITHOGRAPHY

Box 31, Caldwell, N. J.

☐ Mr. Arbolino
(Press)

☐ Mr. Paschel
(Photography)

My Question: _____

(Questions will not be answered by mail, but in an early issue of *Modern Lithography*)

((Only your initials will be used))

Name

Company

Address

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TALE ENDS

FOR some time now, ML's editors have been carrying on a campaign against the use of nicknames like "Buddy," "Sonny," "Chuck," etc., in news stories. Whenever we know the man's real name we change copy to read accordingly, and we also change the numerous "Bill's," "Tom's," etc., to William and Thomas, etc.

Last month, however, one of our staff members followed this style rule a little too zealously. He edited a report of a meeting of Printing Industry of Illinois to show that one of the speakers was "Eugene Flack," popularly known as just plain Gene Flack to numerous industry groups.

Our issue was barely off press when we were taken to task in a tongue-in-cheek dispatch from our veteran Chicago correspondent H. H. Slawson, who has been covering the Windy City for ML for many years. An oldtime newspaper man, Mr. Slawson has probably chased more fire engines in his time, than the late Fiorella LaGuardia. He was raised in the old city rooms, where reporters learned their jobs on the police beat under the guidance of tyrannical city editors, not in the rarified atmosphere of college journalism classes, so he speaks with authority.

"Calling Gene Flack Eugene Flack is about as peculiar as calling Mickey Mantle Michael Mantle," he admonished us. "Nobody would guess who Michael Mantle really is. Now, like Mantle, Gene Flack is known the country round as Gene Flack. I'm dumbfounded that you fellows there in Caldwell never heard of him. I've heard him at conventions for 20 years or more. Once seen never forgotten. He puts showmanship into his oratory and goes in for clowning for all it's worth."

Our correspondent's point is well taken. We're still opposed to those cute nicknames that we come upon in publicity releases and meeting reports but, in future, we'll use a little more discretion before using the blue pencil. And one man whose byline we definitely won't fool around with is Mr. H. H. Slawson himself.

After all these years we're still not sure whether those "H's" stand for Henry, Horace, Harold or maybe even Herkeshimer!

From time to time the editor receives queries from foreign lithographers who are contemplating emigration to the United States. The letters usually ask what are the opportunities in the United States and often, specific areas of the country. ML tries to be as encouraging as possible, without misrepresenting the situation. It would be more helpful, of course, if readers would take a few minutes to reply to these queries,

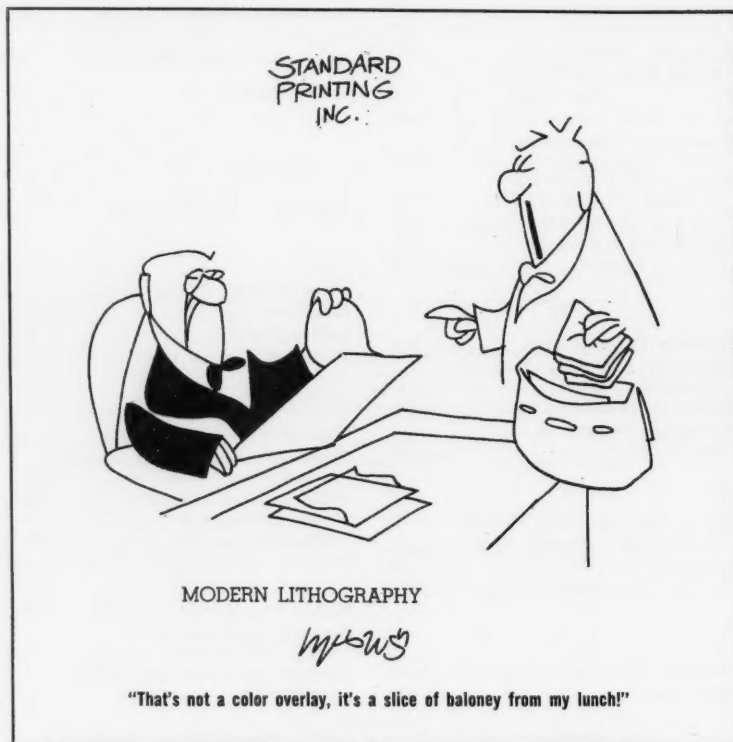
ies, with encouraging . . . or discouraging advice, as the situation warrants.

This month comes a request for information on the litho situation, particularly in the Denver area, from a Finnish "old point (color) lithographer" with 11 years experience in the graphic arts in leading firms in Finland. He is 27, married and the father of one child.

"Could I get a job very soon," he asks, "or is it to be waited for a long time?" Can any reader offer him advice?

A group of presidents of graphic arts associations journeyed to St. Paul at the end of June as guests of Minnesota Mining & Mfg. Co. to tour the elaborate 3-M laboratories there. Reports reaching ML indicate that the trip was enjoyable and quite instructive.

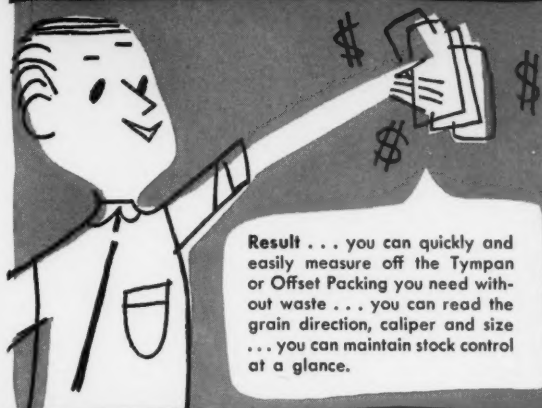
Oscar Whitehouse, executive director of LPNA, last month was elected president of the Washington Trade Association Executives, a group representing many industry associations in the area.



How Cromwell

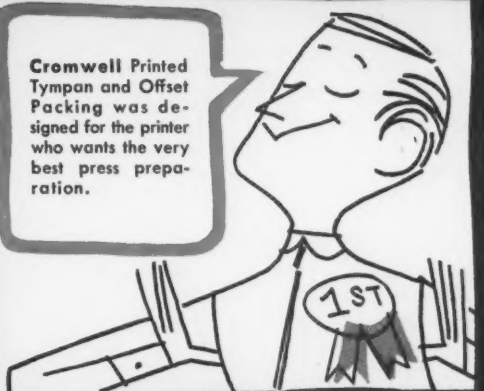
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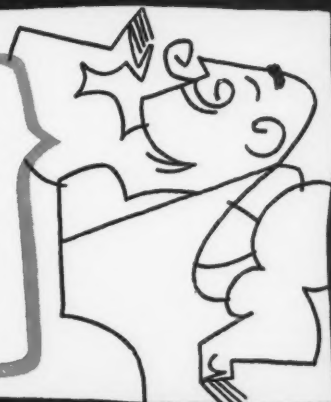


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